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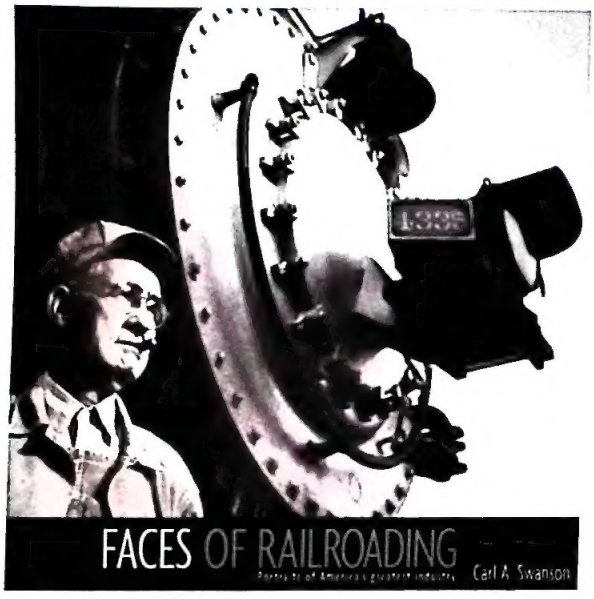

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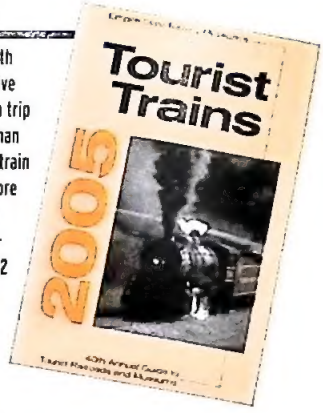

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Editorial
Phone: (262) 796-8776
E-mail: editor@classictrainsmag.com
Fax: (262) 798-6468

Display Advertising sales
Phone: (888) 558-1544, ext. 625
E-mail: adsales@classictrainsmag.com
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Editor's Page

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HOW'S THAT, YOU SAY? It's the formula for this issue, our fifth anniversary edition. A common approach for a magazine marking its anniversary is to look back at events in its field that occurred since its founding. That wouldn't work for CLASSIC TRAINS, of course, so we looked farther back—back to 10 significant classic-era events with anniversaries in 2005. Here's what's behind the numbers:

75: Cleveland Union Terminal opened in 1930, so we asked Herb Harwood to tell the story of its creation.

70: The design for the revolutionary PCC streetcar was finalized in 1935; traction expert Mac Sebree covers this.

65: Five memorable steam-locomotive classes were ordered in 1940, and we present a photo gallery of them.

60: A motive-power era ended in 1945 when Lima built its last Shay; we spent a day with her on the Cass Scenic.

55: F-M's C-Line diesels of 1950 were the subject of articles in TRAINS by David P. Morgan, adapted for this issue.

50: When CPR launched *The Canadian* in 1955, a new era in travel had begun in Canada, as Kevin Holland writes.

45: The East Broad Top helped start the tourist-railroad movement in 1960; Dan Cupper tells its story.

40: EMD's 645 engine, rolled out in 1965, was the heart of 10,000 locomotives; for this we turned to Greg McDonnell.

35: The Burlington Northern merger of 1970 inspired Senior Editor Dave Ingles to explore part of the new system.

30: The American Freedom Train began its tour in 1975, and we have an inside view from hogger Doyle McCormack.

We hope these figures add up to an enjoyable, informative issue. Thanks for your support these last five years.

Robert S. McGonigal

CLASSIC TRAINS 5th Anniversary

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CLEVELAND
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ClassicTrains
THE GOLDEN YEARS OF RAILROADING

SPRING 2005 • VOLUME 6 NUMBER 1

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Cleveland Union Terminal, a most unusual station, opens

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36 1940: Orders Placed for Five Steam Superstars
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46 1945: Big 6 • *By Robert S. McGonigal*
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A trip "up north" to see the newly merged Burlington Northern

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ON THE COVER: Two of the transcontinental flagships of the "World's Greatest Travel System," CPR's *Canadian*, meet at Canmore, Alberta, on November 6, 1960 (see page 58). Robert J. Sandusky photo.

LEFT: Cleveland Union Terminal motor 206 digs in leaving the depot in 1954 with New York Central train 73, the *Prairie State* for Chicago (see page 20). Herbert H. Harwood Jr. photo.

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Contributors

Dan Cupper ["Mr. Kovalchick's Full-Size Train Set," pages 70-75] first visited the East Broad Top as a teenager in 1966. A freelance writer, consultant, and speaker who lives in Harrisburg, Pa., he has authored 10 books and written 20 articles for TRAINS, but this is his first byline in CLASSIC TRAINS. A member of the Friends of the EBT, he helped in the project to reopen Track 3 in Rockhill Yard. Dan also played a role in the restoration and display at Harrisburg's Amtrak station of former Pennsy GG1 4859, with which he's pictured in 1995.

Herbert H. Harwood Jr. ["The Van Sweringens Reach for the Sky," pages 20-31], a New York native and third-generation railroader, retired after 30 years in financial and marketing management for C&O-Chessie-CSX. He has written many articles and books, most recently a book on the Van Sweringen brothers and their businesses ["Second Section," page 110]. Herb actively photographed the changing railroad scene, earning himself a slot in our "Great Photographers" series [Fall '04]. This is his second CT byline, after "Summer Frenzy on Lake Erie" [Summer 2000].

Kevin J. Holland ["The Canadian," pages 58-69] divides his interest in "The World's Greatest Travel System" among Canadian Pacific's rail, air, and sea components. A writer, editor, and publications designer based in Burlington, Ontario, Kevin has had articles in all three CLASSIC TRAINS Special Editions so far, but this is his first in the magazine itself.

J. David Ingles ["Just a Hint of Green," pages 80-89], senior editor of CLASSIC TRAINS, says he wound up with photos of about 75 percent of BN's diesels.

David M. Johnston ["GM&O: Two Roads in One, and Always the Innovator," pages 16-19] was born in Jackson, Miss., in 1952. His boyhood cab rides in GM&O switch engines led to a lifelong interest in the road. He spent his teen years in Memphis, where he began photographing trains. After exploring GM&O spots in Mississippi and west Tennessee, trips to St. Louis and Chicago in the early '70's exposed him to a different side of GM&O than he'd seen in the South. David holds an MBA degree from Memphis State University and is retired from a career in management accounting. He's been a member of the GM&O Historical Society since 1985, currently serving as Treasurer. His two-volume book, *The Gulf, Mobile & Ohio Railroad and its Successors,* is due to be published this year. This is his first CLASSIC TRAINS byline.

Doyle McCormack ["My Two-Year Freedom Train Adventure," pages 90-95] retired in July 2003 after a 38-year career as a locomotive engineer for Norfolk & Western, Southern Pacific, and Union Pacific. A resident of Oregon City, Ore., Doyle keeps busy with SP 4-8-4 No. 4449 and his latest project, an ex-Santa Fe Alco PA1 diesel he is rebuilding. This is his first CLASSIC TRAINS byline.

Greg McDonnell ["Biggest News Since 1939," pages 76-79] is an authority on diesels. An accomplished photographer, he has authored numerous articles and books on railroading. This is his second article in CT, following one on Canadian-built Geeps in Summer 2001.

Robert S. McGonigal ["Big 6," pages 46-51] has been editor of CLASSIC TRAINS since its launch in 2000, and a TRAINS staffer since 1993. Although partial to main lines and rod engines, he's had an interest in No. 6 since she appeared on the cover of August 1967 TRAINS.

David P. Morgan ["A New Dress for Opposed Pistons," pages 52-55] joined the TRAINS staff in 1948, became the magazine's editor in 1953, and retired from that position in 1987. He died in 1990 at age 62. He's seen here in a photo by the late Richard J. Cook beside a Mil-

waukee Road class A 4-4-2 on his first visit to Milwaukee to meet A. C. Kalmbach in August 1947, a year before he wrote the first of his two C-Line stories.

Jerry A. Pinkepank ["Why the C-Line Fell on Its Face," pages 56-57] is an international rail consultant based in Seattle. He wrote the original Kalmbach *Diesel Spotters Guide*, founded *Extra 2200 South* magazine, and authored numerous feature articles for TRAINS in the 1960's. His Grand Trunk Western tribute appeared in Summer 2004 CT.

G. Mac Sebree ["PCC: The Wonder Car," pages 32-35] has combined an intense interest in electric railways with a lifelong career in writing and publishing. A graduate of the University of New Mexico, he was a political reporter for UPI for 12 years, then migrated to the West Coast to work for a major newspaper feature syndicate. In 1974 he founded Interurban Press, a company which published some 100 railroad and traction books, as well as four rail-oriented magazines. He sold that company in 1993 and retired to Vancouver, Wash. In 2001 he started TRAINS' "City Rail" column, which he wrote for two years. This is his first CLASSIC TRAINS byline. Mac thanks Fred W. Schneider III and Steve Carlson for reference to their definitive book, *PCC: The Car That Fought Back* (Interurban Press, 1980).

RAYMOND LOEWY

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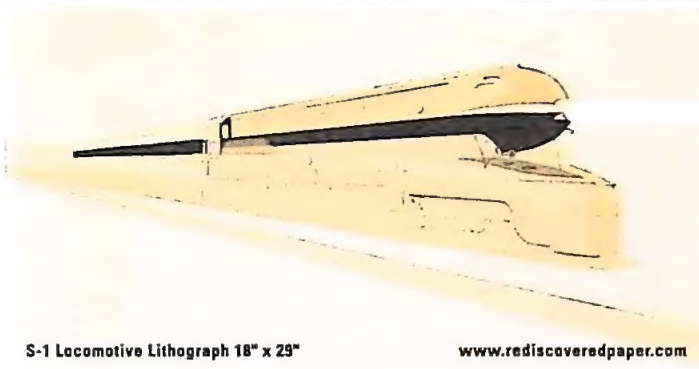

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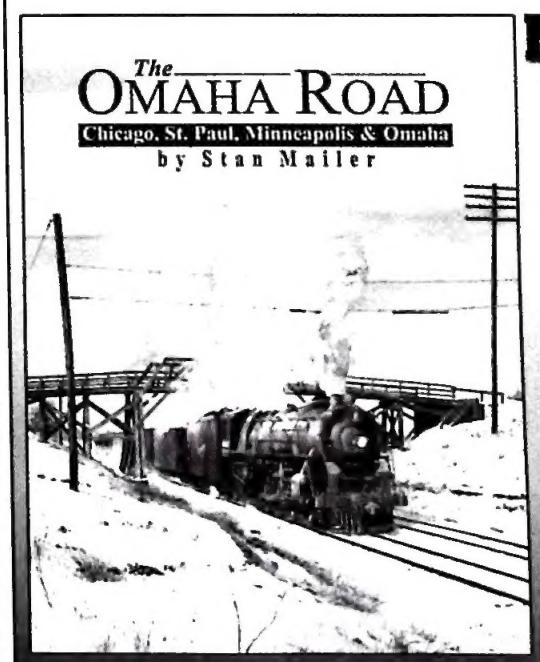

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Pere Marquette spirit—it's a Wolverine thing

The Pere Marquette Railway came under control of the Van Sweringen brothers [pages 20-31] in 1924 and entered their Chesapeake & Ohio camp in 1928. C&O didn't fully merge the PM until 1947, but one's influence on the other was unmistakable—and that worked in both directions. Consider this scene at the former PM's roundhouse at Wyoming shop at Grand Rapids, Mich. It's undated, but 1953 is a likely year. C&O kept steam on the east end of its system until 1956 to satisfy coal customers, but made a big bow to important Michigan customer General Motors with orders for switchers and Geeps that dieselized its Northern District (*i.e.*, the PM) by 1952. PM had 14 NW2's of its own, built 1942-46, but sister 5211 was among 14 that capped C&O's Northern District fleet at 31 in 1949. Geep 5766 is from the big order of 59 GP7's delivered in 1951-52. The first postwar streamliners, the *Pere Marquettes* of 1946, employed E7's 101 and 102 (freshly repainted here); PM got 6 more through 1947, then the final 4 came in 1948 lettered C&O. The trains'—and PM's postwar diesels'—colors allegedly derive from the University of Michigan's maize and blue, even though UofM's campus in Ann Arbor wasn't on the PM. One could argue that the current colors of today's successor, CSX, carry on that Wolverine tradition.

Chesapeake & Ohio photo; John B. Corns collection

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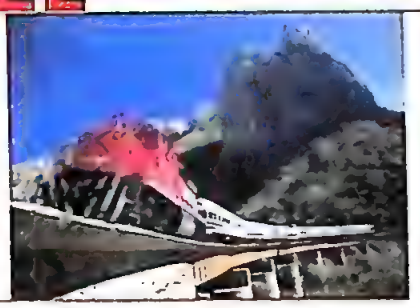

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Pictures, and apostrophes

I am a charter subscriber and would like to mention two important points about CLASSIC TRAINS. Every issue is filled with fine photographs of railroading, but many of the pictures show much more than just the railroad. You have to look at the people, the autos, the street lights and signs, the buildings, the cleanliness of the property, the telephone poles (yes, even they have changed over the years), and so very much more. Many of the pictures tell stories, about a different time, one I'd return to in a heartbeat if I could (I'm 61). You do this issue after issue, and somehow each new issue seems to eclipse the previous one.

You also do something about which I'll bet you receive almost no letters. You correctly use the apostrophe when making plural symbols or letters. After all, does K4s refer to more than one K4, or does it refer to a K4 with superheat? Does 4-8-4s refer to more than one 4-8-4, or does it mean that the 4-8-4 has some special appliance? Using the apostrophe makes reading railroad literature easier and more understandable. Your sister publication, TRAINS, stopped using the apostrophe in this manner a while back, and I think it diminishes its readability.

Bill Sigmund, Lititz, Pa.

A head-turner, all right

Thanks for the format ["Photo Section," pages 48-55] in which photos are displayed on one page, whether they be vertical or horizontal. The binder seam is a nuisance when one wants to remove and mount the photo.

Charles Kilbourne
Upper Marlboro, Md.

Making time on the Erie

I'm not often consciously impressed by writing, but Chuck LeFever impressed me enormously with his "Making Time on the Midlander" [pages 56-61]. Like many fans, one great disappointment in my life is that I've never had the opportunity to ride a steam locomotive, but LeFever brought me closer to that thrilling experience than anyone else I can recall in 60 years of reading. His descriptions truly evoke the feeling of a steam locomotive running at high speed. Moreover, he treats the human aspect with a sensitivity and subtlety so often missing in such writing. His engineer, O.D. Hummer, while possibly viewed at the outset as a slightly threatening character, turns out to be a true professional who takes real pride in performance, and turns out to be a man whose warmth is masked behind the formality of another era.

Andrew Sackerman, Marlboro, N.J.

I rode Erie and EL passenger trains from 1945 until the end in 1970-71, and they never failed to get me to my destination, invariably on-time, and thanks to the dining-car service, well-fed. In regard to a point in Chuck LeFever's fine article about the mystery of O.D. Hummer's name, I contacted retired Erie/EL Kent Division conductor Winton P. Arnold, who made a few trips with O.D. as head brakeman. He tells me the "O" stood for Oren, but fellow workers called him "Dort." Winton further noted that "he was exactly as the writer tells, at least on the job—firemen and brakemen were just essentials and not people to waste much idle chatter on."

One reason many train-and-engine-service men were known principally by their initials is that the rubber stamps they carried to validate time slips usually made provision only for initials and last name. Then, too, the "every letter counts" discipline of telegraphy discouraged the use of more than minimal identification for people, even the "big brass." Even today many railroad officers are identified only by initials.

M.J. Connor, Vice President
Ohio Central Railroad, Coshocton, Ohio

Today on Park Street

Linn Westcott's photo of two B&O "Big Sixes" southbound through Wapakoneta, Ohio ["Photo Section," pages 50-51] evoked childhood memories of growing up in the 1950's in this small western Ohio town. The photo actually looks north on Park Street; Willipie Street is one block to the west, and the [former] B&O does not cross it for another three blocks south of the photo's location.

Dennis E. Elliott, Powell, Ohio

WAYNE YORK

Where B&O 2-10-2's trod: A bit worse for wear, Wapakoneta's Park Street signals still stand.

Those then-new, center-island crossing signals on South Park Street are still there, and are the only ones left in town. The accompanying photo [above] was taken in November 2004.

Wayne York, Wapakoneta, Ohio

It's the *Colonial*, I'm sure

The train in "Photo Section" on page 53 at New Haven, Conn., is the *Colonial*, which of course is headed for Washington as well as New York. I'm positive of this because I used this train during my days as an MIT student and afterward while working in Cambridge, Mass. A clue is the all-PRR head-end consist.

I preferred trains bound for Penn Station over Grand Central for two reasons: the wonderful view of Manhattan from Hell Gate Bridge (usually while finishing a late lunch or early dinner in New Haven's good dining or grill cars), but more for the convenience of reaching my parents' home, near Central Park West, via subway.

Incidentally, riders exiting New Haven trains at Penn Station were not charged the New York Connecting Railroad [Hell Gate Bridge route] surcharge which was assessed to passengers going beyond New York.

The best article in the issue was firing the Erie locomotive across Ohio, and the most surprising was "Old Sparky."

Dave Klepper, Jerusalem, Israel

Wabash: Goin' to Kansas City

Steven Duff's article on Canadian National's Key Harbour branch ["Old Sparky," pages 38-41], was a real gem, and I also enjoyed Lou Marre's on Missouri Pacific at Fort Smith, Ark. ["Shooting Eagles," pages 74-79], and the experiences of the Erie fireman in Ohio.

Be careful, however, of using the all-inclusive word "no," as you did in the "Second Section" mention [page 95] of Wabash passenger trains. My January 1930 *Official Guide* has an advertisement for the *Central States Limited*, trains 28 and 29, which left Kansas City and Detroit in the evening and operated "via Hannibal, Mo.," arriving at the other terminus in afternoon. They carried two sleepers and a diner. Branch-line coach connections were provided between Hannibal and Quincy, Ill. By April 1934, the service was apparently the victim of the Depression.

Carl V. Ehrke, Belleville, Ontario

Every Easter vacation, our family would ride the Wabash from Detroit's Fort Street station ["Bumping Post," page 98] to St. Louis' Delmar Street station. I hadn't seen that relief in Fort Street, depicting the evolution of train transportation, since the early 1960's. Notice the two small metal squares to the left of the Norfolk & Western train-list board, between it and the blank board. One square was for the conductor's key to unlock the public address system, and the other was the microphone through which he would, in a booming voice, announce the city names on that list. I can still hear that in my mind, but all I have to remember Fort Street station by is a track diagram of the area around the building.

Chad Ervin, Marietta, Ga.

Errant Eagles

Thanks for publishing Lou Marre's excellent photo coverage of the Missouri Pacific's Central Division passenger trains during their final years [pages 74-79]. A few corrections are needed for historical accuracy. This route never hosted the *Sunflower* (an MP train on the St. Louis-Kansas City route), but those unnamed locals 125-126 could trace their origin back to two named

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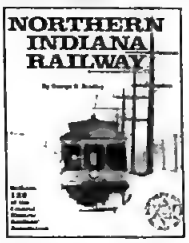

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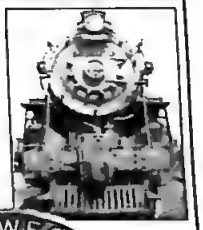

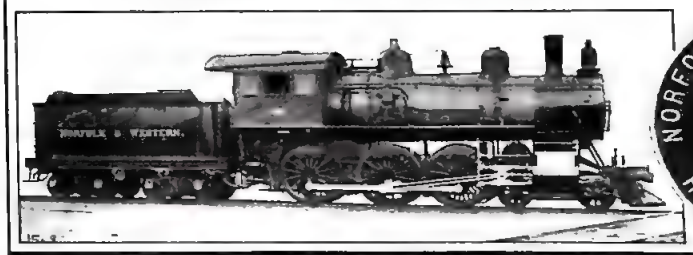

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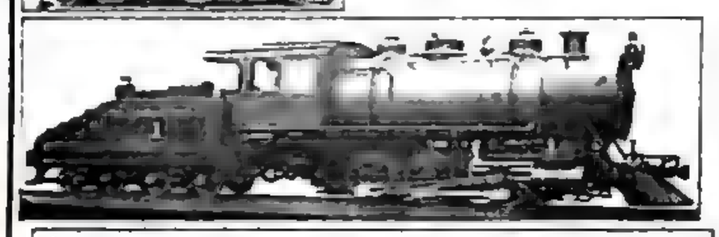

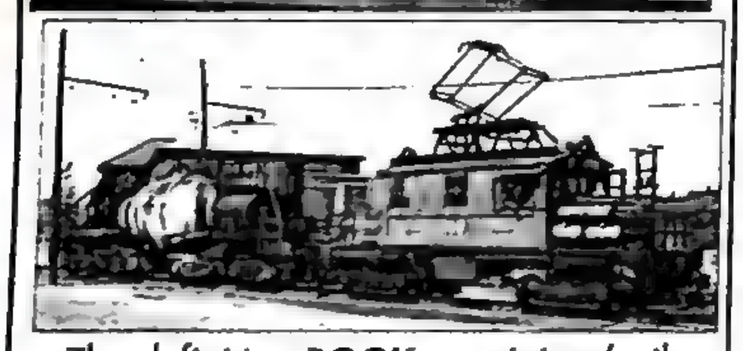

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trains, the *Rainbow Special* and the *Southerner*. Train 125 operated from Kansas City to Little Rock, and train 126 northward, the reverse of what is indicated in several captions.

Bill Pollard, Conway, Ark.

The article brought back memories from my days at nearby Camp Chaffee during February-May 1951 when the Army tried to make soldiers out of reluctant Korean War draftees. We arrived on a steam-powered troop special from Fort Dix, N.J., over PRR to St. Louis and MoPac via Little Rock. Weekend passes helped relieve the misery for this displaced upstate New York railfan, and on a Saturday evening, *the* show was the departure of the Frisco local north to Monett, followed by the arrival an hour later of MoPac's *Rainbow Special* en route to Kansas City. Kansas City Southern, however, had the best station in Fort Smith, a multi-track, stub-end terminal several blocks uptown, featuring connecting bus service to Sallisaw, Okla., to the KCS's mainline trains.

Robert E. Wilson, Marietta, Ga.

Meeting M-190, after her career

In response to Richard J. Anderson's "Meeting M-190 Face-to-Face, at Last" [pages 62-63], I had a similar encounter when I was in Albuquerque on business in 1985. While looking around at the Santa Fe station, I met another fan who said some old equipment was stored in the nearby roundhouse. We ventured down there and found some locomotive doors open. Walking through the first one, I came face-to-face with M-190. What an impressive sight! We walked alongside it, then noticed a 5000-series 2-10-4 in an adjacent stall, plus some other equipment. Then an employee saw us and ordered us out.

The items were being prepared for movement to the California State Railroad Museum in Sacramento, which began just a few days later.

Richard Becker, Broomfield, Colo.

The streamliners always won

I'd understood that Milwaukee Road employee timetables carried the famous special instruction, "Reduce Speed to 90," for the EJ&E crossing at Rondout, Ill., but until Gil Reid's "When the Green Hornet Raced the Hiawatha" [pages 82-83, in "The Way It Was"], I didn't know there were speed-limit signs [for the curve at Deerfield] visible to the public.

In later years traveling by auto on business, I often raced streamliners of the C&NW, Rock Island, and Burlington—sort of. I'd be driving along, realize I was being overtaken, and would try to keep pace. The ending was always the same—either other cars or a small town would intrude. It made no difference; I wasn't staying even, let alone catching up. For a few paragraphs here, though, I rode with the boys. Thank you!

Bob Jack, Atlanta, Ga.

GG1's, too, at Wallingford

I was raised along the same branch of the Pennsylvania as George Gillespie at Swarthmore, Pa. ["One Man's Favorite Locomotive," in "The Way It Was," pages 83-86], only at Wallingford, the next station down the line, separated by a large trestle (I never had the nerve to walk across it, though some did). In the mid-'30's, I would sit on a bench in front of the Wallingford station in late afternoon when this same train as Gillespie writes about would barrel through, and I remember it well.

Although the line was electrified, all freights were steam. Besides the regular M.U. cars on passenger trains, during World War II the PRR used GG1 locomotives on the express runs. I left the Media station to go into military service on a train pulled by a GG1.

Richard K. Hoffman
Bowling Green, Ky.

Big Four was a Cincinnati road

While the Big Four Route (Cleveland, Cincinnati, Chicago & St. Louis Railway) had extensive operations in Indianapolis, and routes radiating from there, its headquarters were not there, as stated in "One Day at ... Kankakee, Ill." [pages 42-47], but in Cincinnati. The original headquarters was in an 1890 red-brick office building on the south side of Third Street just east of Smith Street. The later Big Four Building was just west of the old Cincinnati Central Union Depot, and subsequently the Big Four moved its headquarters to

a building at 230 E. Ninth St. The building on Third Street was sold in 1960, vacated by the railroad by the early 1970's, and finally damaged by fire in the 1980's and torn down. New York Central vacated 230 E. Ninth St. in 1965, but this building is still there, used for offices.

The Big Four leased all of its railroad lines and property to New York Central in 1930 or 1931 but remained an active corporation until after the sale of most of its railroad lines to Conrail on April 1, 1976. After 1976, the Big Four merged with Penn Central Corp. in connection with the bankruptcy reorganization of the new, non-rail Penn Central.

Robert Threlkeld, Carmel, Ind.

Corbin — an unknown Shangri-La

When I was a pre-teenager from Tennessee visiting my grandparents in Corbin, Ky., I would stand on their front porch anxiously awaiting the passage of the next northbound Louisville & Nashville coal train as it skirted the yards. Working upgrade, the dual "Big Emmas" would shake the house as they moved 60 to 80 hoppers of Kentucky coal to destinations unknown to me. I always marveled at the noise level of the twin exhausts, thinking it could get no louder, but it always did just as the matched 2-8-4's disappeared behind the laundry building across the street.

Imagine my amazement, then, when I turned to pages 68-69 of Winter CLASSIC TRAINS and found the aerial view of L&N's 1945 facilities at Corbin ["Bird's-Eye View: Three Key Locations on the Old Reliable," by Ron Flanary]. Not until that moment did I ever imagine there was anything in Corbin that Dad and I could've visited, when we drove downtown, besides the station and some yard tracks. We always stopped at the depot, but there I was, next to Shangri-La and never knowing it! Just down the tracks stood everything a young railfan could have ever hoped to see.

David Kaplan, Chattanooga, Tenn.

Rocketing on the Central Vermont

It was a pleasure to read Scott A. Hartley's review of the Central Vermont ["Fallen Flags Remembered," pages 14-17] , as it brought back many fond memories. One small correction: Trains 429-430 were listed as the "Rocket" and "Newsboy," respectively, although some referred to 430 as the "Paper Train." The name "Rocket" was also later applied to the piggyback operation between Palmer, Mass., and St. Albans, Vt.

Doug Brittin, Half Moon Bay, Calif.

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GM&O: Two roads in one, and always the innovator

From its 1940 creation through its 1947 northern expansion to its 1972 demise, GM&O personified the "merger movement"

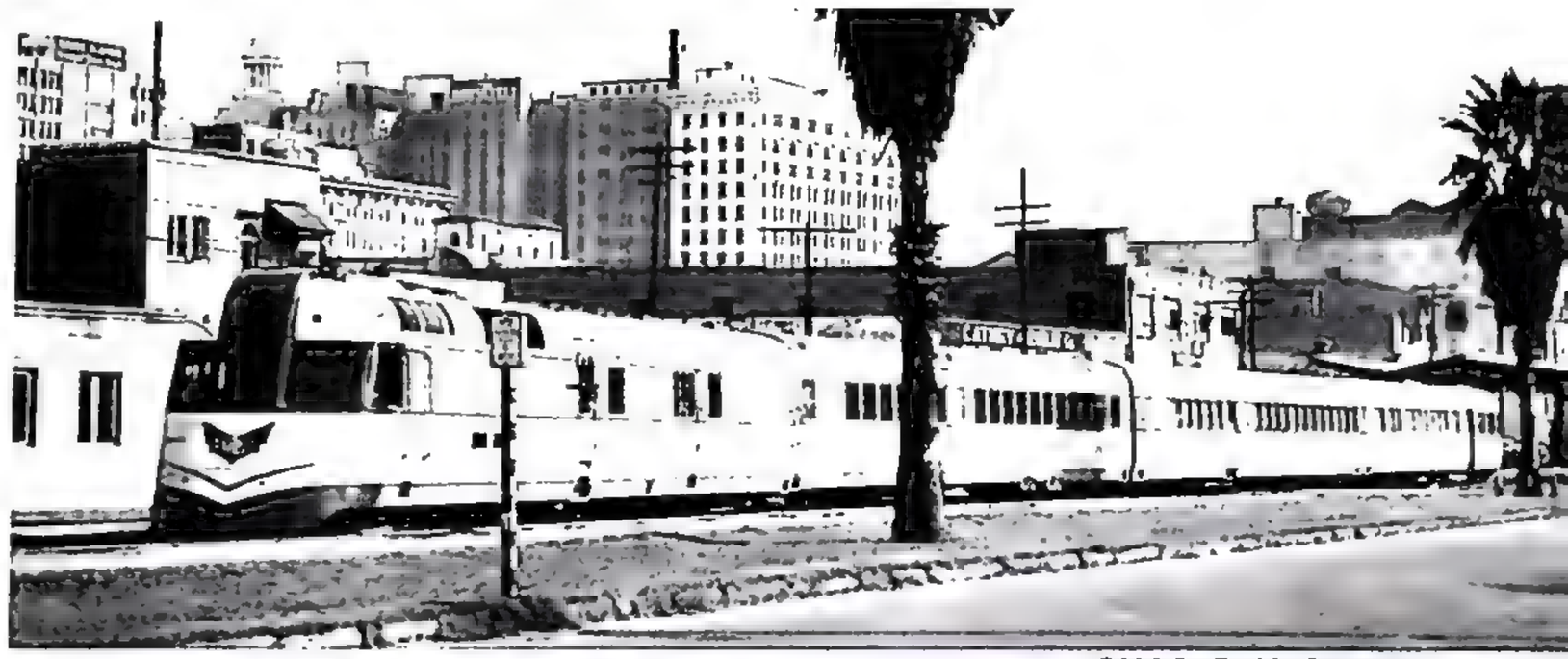
THE "modern merger movement" is often said to have begun in 1957 when Louisville & Nashville absorbed the Nashville, Chattanooga & St. Louis, in which the L&N had a three-quarters ownership. Some would argue that three similar 1947 mergers—Denver & Salt Lake into Denver & Rio Grande Western; Alton Railroad into Gulf, Mobile & Ohio; and Pere Marquette into Chesapeake & Ohio—should mark the movement's beginning. In all four cases, though, the surviving carrier already had a stake in, or a degree of control over, the "fallen flag."

Omitting the interruption of World War II, a significant merger occurred just before the first three above, in fall 1940—the creation of the GM&O itself. Some would argue that GM&O's creation—a classic "parallel merger"—set the tone for rail mergers in the second half of the 20th century.

GM&O was formed from two Deep South carriers: 827-mile Gulf, Mobile & Northern and 1180-mile Mobile & Ohio. GM&N reached from the ports of Mobile, Ala., and New Orleans, La., north, joining at Union, Miss. (between Jackson and Meridian), en route to the west Tennessee city of Jackson, while M&O, which paralleled GM&N 25 to 30 miles to the east, went from Mobile through Meridian, Miss., and Jackson, Tenn., to metropolitan St. Louis.

Both partners had colorful histories dating to the mid-1800's. As was true for many railroads, each itself arose from mergers of smaller lines, including logging and narrow-gauge pikes. GM&N's slim-gauge predecessor, the Ripley Railroad in northern Mississippi, pre-dated the better-known Colorado narrow-gauges, and the same was true for the M&O's 3-foot-gauge predecessor in southern Illinois, the St. Louis & Cairo.

M&O's tracks north of Corinth, Miss., had been the objective of the opposing armies in the Battle of Shiloh during the Civil War, and M&O suffered severe damage in fighting around Meridian. GM&N was the evolution of several end-to-end mergers and reorganizations of small roads that tapped the hilly, heavily forested areas of southern and central Mississippi. Forest and related paper products would be a system traffic staple for over a century.



GM&O: B. M. SHERIDAN

GM&O kept the silver-and-crimson colors of predecessor Gulf, Mobile & Northern's 1935 streamliner *Rebel* (leaving Southern's Terminal Station in New Orleans, above, at age 10), and applied them to its early diesels, such as 1940 S1 664.

GM&O PHOTO, J. DAVID INGLES COLLECTION

The man behind the GM&O was Isaac Burton "Ike" Tigrett (TY-gret), a banker from Jackson, Tenn. He'd been appointed receiver for the GM&N when it emerged from government control after World War I, and his business philosophy was "growth by merger and take care of the stockholders first." Tigrett surrounded himself with executives who would think unconventionally, rare in the staid railroad industry.

Mobile & Ohio had been in bankruptcy during the Depression and was controlled by the Southern Railway. When Southern offered the M&O for sale in the mid-1930's, Tigrett saw an opportunity to protect and strengthen GM&N's territory and extend its reach to the St. Louis gateway.

Toward this end, he incorporated the Gulf, Mobile & Ohio in November 1938, and directed purchase of the M&O, completed on September 13, 1940. His timing was fortunate, for the traffic surge brought on by World War II allowed the new company to prosper beyond anyone's expectations.

Tigrett was an innovator, with both

M&O Consolidation 547 and GM&N Decapod 255 leave Jackson, Miss., northbound in May 1941.

C. W. WITBECK

By David M. Johnston

the GM&N and the GM&O. The merged carrier was the first large Class 1 road to dieselize, and it made extensive use of gas-electric (later, diesel) motor cars for local and branchline passenger service. Before the merger, Tigrett's GM&N joined the streamlining trend when it introduced in July 1935 the lightweight, diesel-powered *Rebel* linking Jackson, Tenn., and New Orleans. Just weeks after the merger, GM&O upgraded its passenger service with full-sized cars on the St. Louis-Mobile *Gulf Coast Rebel*, pulled by new Alco DL109 diesels. (As a result, the three pioneer *Rebel* trains came to be called "the Little Rebels.")

In freight service, GM&O was a unit-train pioneer. In the late 1940's, it ran solid consists of refrigerator cars of bananas from the Mobile port to northern markets, and in the early 1960's it was among the early operators of unit coal trains. This concept was not new, but GM&O's unit trains were the first to haul coal in customer-owned cars on a fixed-price contract, directly from mine to utility. The customer was Chicago's Commonwealth Edison; its rotary-dump gondolas shuttled between southern Illinois mines and power plants near Joliet, Ill., and Hammond, Ind.

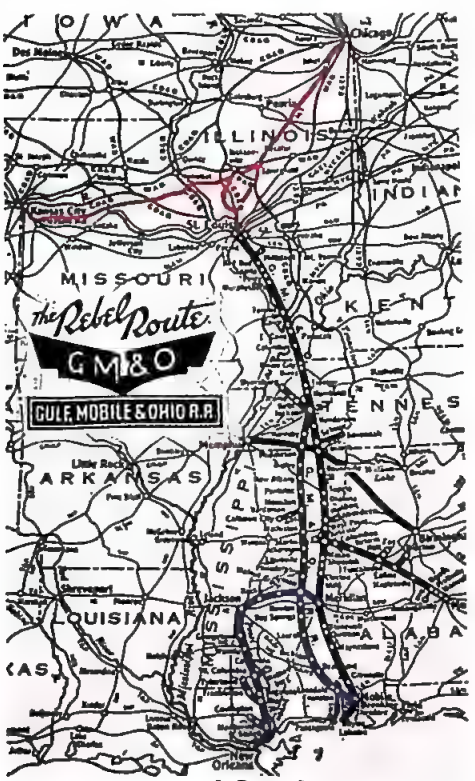
The new GM&O went to work in 1940 with a fleet of small, aging steam locomotives, dominated by 87 2-8-2's, 61 4-6-0's, 26 4-6-2's, and 26 2-10-0's, none built after 1928. Spurred by a cost-benefit analysis conduced by then General Manager Glen P. Brock, GM&O aimed at an ambitious goal of completely dieselizing by 1950. GM&O beat that by a year, when Mikado 404 tied up on an October 1949 day at Columbus, Miss.

GM&O's diesel fleet was almost all Alco. A 6-cylinder 539 engine powered each of the three ACF-built *Rebels*, and their silver-and-crimson colors were applied to GM&O's first diesels: the 3 DL's; 4 S1's of 1940; and 12 S2's of '41-46. The breakthrough for dieselization, in '46, was Alco's first fleet of 1500 h.p. freighters (55 cabs and 31 boosters) that came to be known as "FA's" and "FB's."

Tigrett didn't stop at St. Louis. He had his eye on Chicago, and a golden opportunity for further expansion came in 1943 when the bankrupt Alton Railroad was offered for sale by owner Baltimore & Ohio. The Alton, which B&O had renamed from "Chicago & Alton" in 1931, two years after it purchased the road, had two routes out of St. Louis. The main line, which dated from the 1847 Alton & Sangamon, went to Chicago; the other went to Kansas City.

By buying the Alton, Tigrett's goal of creating a Gulf-to-Great Lakes railroad would be realized; Kansas City was almost an afterthought. B&O's goal with the Alton had been to break the invisible east-west Mississippi River wall as only the Wabash otherwise did, but this was ultimately thwarted by other big Eastern roads, so with little freight traffic on the Alton, B&O sold it. GM&O's directors agreed with Tigrett's plan in early 1945. After some delay by the Interstate Commerce Commission, GM&O and Alton were united on May 31, 1947.

The merged carrier kept the name Gulf, Mobile & Ohio, but Tigrett was savvy enough to submerge "The Rebel Route" slogan and adopt "The Alton



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This map from GM&O's August 13, 1945, timetable has been colorized to differentiate the lines of M&O (black), GM&N (blue), and Alton (red).

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- A Western Pacific Scrapbook of Memories -
by Bob Larson

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J. PARKER LAMB

Stalwarts of GM&O's "south end," an FA1-FB1 duo departs Meridian, Miss., in August 1950. Note the rain runoff trough above the cab steps and the lowered headlight, found on early FA's.

Route," since the Alton was the premier passenger carrier on the fast, competitive Chicago-St. Louis corridor. GM&O also deferred to the Alton's colors, giving up the silver-and-crimson for Alton's red and maroon with gold trim, in which even the pre-merger FA's were delivered.

The amalgamation transformed a profitable little Class 1 serving a Deep South region with an agriculture-based economy into a 2900-mile trunk line serving Chicago, St. Louis, and Kansas City. But in many ways GM&O continued to be "two railroads in one." The northern region and southern region (or "north end" and "south end") were different in character, as was their motive power, well into the 1960's. In the South, Alcos reigned supreme, but in the North, there was a mix. While the Alton had acquired 10 S2's and 10 RS1's right after the war for yard jobs and locals, EMD's ruled the road. Alton had inherited two EMC passenger units from B&O, a box-cab and a streamlined EA, and also got seven of the earliest E7's. Orders for F3's (by the Alton, delivered as GM&O) and F7's followed. The fleet totaled 28 F3's and 14 F7's, with 12 F3's (9 cabs, 3 boosters) having steam boilers and being utilized in both passenger and freight duty.

With 34 RS1's, 14 RS2's, and 9 RS3's for local freights, GM&O never owned a Geep until the second generation. As the 1950's waned, broken crankshafts, especially on the FA's, kept workers busy at Iselin Shops in Jackson, Tenn., but officials received no such complaints about the F's from the former Alton shops at Bloomington, Ill. EMD was offering attractive trade-in terms on its new GP30, so GM&O struck a deal that would, during 1962-65, see all Alco road units (plus the lone Ingalls road-switcher and GM&O's only Baldwins, a pair of passenger cabs) go in trade for 31 GP30's and 48 GP35's, which rode on the FA's trucks and kept their Westinghouse traction motors. EMD designed the Geeps' black-and-white livery, as well as the subsequent red-and-white schemes on follow-up SD40's and GP38's.

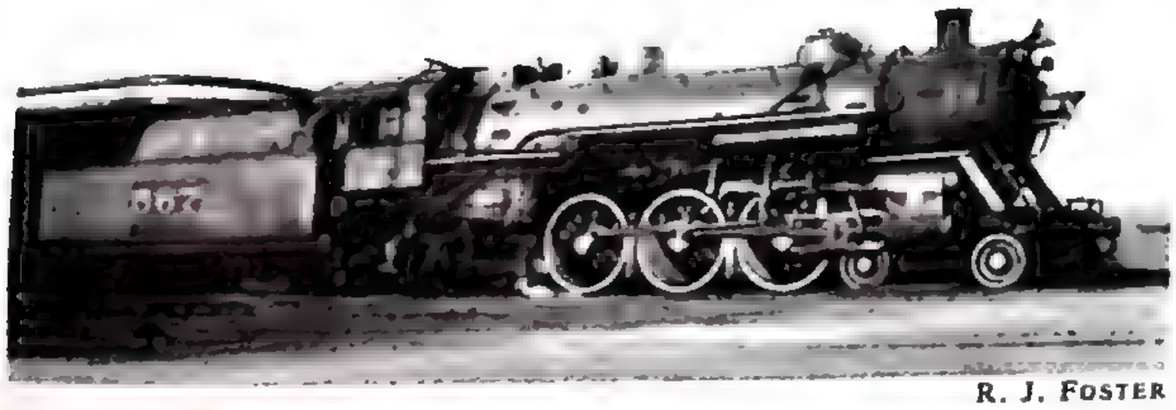
My first memories of the GM&O are from this period, when family trips from Memphis to visit relatives in Mississippi put me "on-line." To a young fan, GM&O seemed a lot like a family business. The friendly station agent in Walnut Grove, Miss., was always willing to share information about the next train, and if one was due, we'd go out to the Highway 35 grade crossing near my uncle's farm and wait. I can still see those FA's roaring past!

In summer 1964, when I was 12, I flew over to Starkville, Miss., on a Southern Airlines DC3 to visit some cousins. One day as my aunt drove us around town, we spotted the Starkville branch job switching. It was an Alco, probably an RS1, freshly painted bright red. When the crew saw several excited kids standing there watching them work, they invited me and two of my cousins up into the cab. The Starkville branch was abandoned a year or two later.

Other trips took us to reunions at a lake resort near Louisville (say it Lewisville) in the late 1960's. By 1968 I was old enough to drive, so when things got dull I'd borrow car keys and drive to the GM&O yard in town to watch trains. I'd always find an Alco working the yard's south end, and when the crew would spot this 16-year-old shooting pictures with an Instamatic, they'd invite me into the cab of their S2 or RS1.

In the South, the GM&O main lines navigated a hilly profile and were unsig-

Representing "south end" steam: USRA 4-6-2 567, ex-M&O 268, at Trendley Avenue station, East St. Louis, Ill., and ex-GM&N 1926 Baldwin 2-10-0 262, at Jackson, Miss., in October 1944.



R. J. FOSTER

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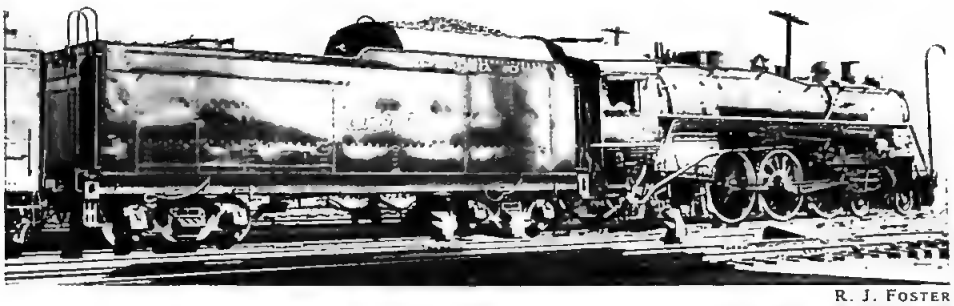

R. J. FOSTER

To familiarize Midwesterners with its name, GM&O kept Alton's colors and "the Alton Route" slogan, seen on freshly repainted Alton 4-6-2 5296 in October 1948, and on year-old F3 885A leaving Chicago the previous July with the *Ann Rutledge*.

ROBERT H. MILNER

naled. Although well-maintained, the track didn't really appear to be that of a Class 1. The rail was not heavy, and the roadbed wasn't immaculately groomed or heavily ballasted. Conversely, the former Alton Chicago-St. Louis main, being a high-speed passenger railroad, had block signals—distinctive B&O-style color position lights, only now finally being replaced. Quietly progressive, GM&O in the '60's installed CTC signaling on the Alton and single-tracked it.

I once heard the GM&O favorably described as a "3000-mile short line," which the Southern Region surely seemed to be. Despite appearances to the contrary, GM&O was a profitable company, thanks to conservative management and strict attention to customer service.

Even as GM&O modernized, Brock, elevated to president in May 1957, eventually saw in its bigger, parallel competitor Illinois Central the familiar parallel-merger "writing on the wall." So, in the mid-'60's, Brock began the discussion process that would, two and a half decades after the Alton acquisition, result in the next merger, IC taking over GM&O. This occurred in August 1972, with IC adding Gulf to its name.

Much of the original GM&O is gone, though not the Alton. Short lines and Kansas City Southern operate some segments in the South, and KCS also has the St. Louis-K.C. line. Most of Chicago-St. Louis belongs to Union Pacific and is being upgraded into a higher-speed passenger route for improved Amtrak service (Chicago-Joliet stayed with IC, now Canadian National). Difficult as it may be to comprehend, GM&O now has been extinct just about the same length of time that it existed and carved a lasting niche in our memory. ■

GM&O fact file

(comparative figures are for 1940 and 1971)
Route-miles: 2007; 2734
Locomotives: 174; 258
Passenger cars: 62; 92
Freight cars: 4945; 12,699
Headquarters city: Mobile, Ala.
Notable postwar passenger trains: *Abraham Lincoln, Alton Limited, Ann Rutledge, Gulf Coast Rebel, Midnight Special*
Special interest group: Gulf, Mobile & Ohio Historical Society, P.O. Box 1085, Clinton, MS 39060; www.gmohs.org
Recommended reading: *Gulf, Mobile & Ohio*, by James H. Lemly (Richard D. Irwin, 1953); *Gulf, Mobile & Ohio Color Pictorial*, by R.R. Wallin (Four Ways West, 1996); *Chicago & Alton Railroad*, by Gene V. Glendinning (Northern Illinois Univ. Press, 2002)
Source: *The Historical Guide to North American Railroads* (Kalmbach, 1999).

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Terminal Tower, the defining element of Cleveland's skyline, soars above the city's main post office and CUT's catenary structures and trackwork in the early 1950's.

MAIN PHOTO: RICHARD J. COOK
PORTRAITS: SHAKER HISTORICAL SOCIETY

The Van Sweringens reach for the stars

How two eccentric brothers from Cleveland and their suburban real-estate venture helped create one of America's most unusual passenger terminals

By Herbert H. Harwood Jr.

O.P. Van Sweringen

M.J. Van Sweringen

CLEVELAND UNION TERMINAL was physically unlike any railroad station in North America—perhaps the world. Not only that, but its evolution, construction, and subsequent life were a succession of mutations, conflicts, oddities, and anomalies. Consider a few: No railroad conceived it, nor was it built under railroad management. It had no exterior architectural style because there was no exterior. It came into being only after a bitter civic battle that had to be settled by public referendum. Even so, the engineering and operating managements of its railroad owners were emphatically against building it, and for good reason. But they dared not dissent. And among its human casualties was one of the New York Central's top executives. Once operating, it was filled with the visible ghosts of unrealized dreams.

But what truly set CUT apart was the vision that created

HERBERT H. HARWOOD JR. COLLECTION

Cleveland's ramshackle old Union Depot, seen on a frigid day circa 1930, was such an embarrassment that a local businessman erected a billboard nearby disowning it on behalf of his fellow citizens.

it. For CUT was far from just another large railroad station. It formed the foundation of a one-of-a-kind, fully self-contained "city within a city," all its components designed as a structurally integrated, interconnected unit.

The complex incorporated Cleveland's principal railroad terminal and hub of a planned rapid transit system; four large office buildings including the soaring Terminal Tower—for almost 40 years the tallest in the U.S. outside New York City; the city's largest hotel at the time; its finest department store; its central post office; a range of restaurants and smaller stores; two banks; medical and dental offices; and a large parking garage. Further, CUT's plan provided for additional office buildings, a theater, and a "merchandise mart" like Chicago's.

Making all that possible was another unique aspect of CUT: Its facilities were entirely below street level and invisible from the outside, with the Tower and all the other existing and planned buildings above its ceilings. In short, it represented the ultimate expression of the air-rights idea pioneered by the New York Central in New York City.

Which was not entirely coincidental—and therein lies a strange, complex, and ultimately tragic story.

The brothers Van Sweringen

It all started in a wholly different and more modest form 21 years before CUT formally opened, conceived by a pair of decidedly unusual real-estate developers—odd even to their given names. Oris Paxton and Mantis James Van Sweringen were two tightly bonded bachelor brothers who were born in near-poverty but were ambitious, hard-working, and unusually creative—and also extremely modest, shy, private, almost reclusive. Nobody, by the way, called them Oris or Mantis; they were "O.P." and "M.J." to their friends and associates, and "the Vans" to everyone else. The two were direct opposites: O.P., the dominant one, was the visionary, planner, negotiator, and business genius; the more practical and less-gifted M.J. was the details man.

Beginning in 1907, the brothers had begun developing an innovative, uniquely planned upper-class suburb on a large tract of farmland located on a plateau just southeast of the city. Their Shaker Heights Village, named for the Shaker religious community that originally owned the land, was to be a rarified blend of tight architectural restrictions, aesthetic surroundings, and all the appropriate amenities—including, of course, country clubs. To set it apart from the ordinary streetcar suburb, they envisioned a high-speed, grade-separated rapid transit line direct to the city's Public Square.

The Square traditionally was Cleveland's commercial and spiritual center, and all the major streetcar and interurban lines looped around its four quadrants. By the early 1900's, though, its hallowed status was slipping as stores and offices began gravitating eastward along Euclid Avenue. Its southwest quadrant was especially nondescript, and in 1909 O.P., always alert to undervalued opportunities, acquired four acres there for his rapid transit terminal.

At the time, six (technically seven) railroads reached Cleveland: New York Central, Pennsylvania, Nickel Plate, Baltimore & Ohio, Erie, and Wheeling & Lake Erie. The seventh was the Central's Big Four subsidiary, which was legally a separate company and operated as such.

Central was overwhelmingly Cleveland's dominant railroad; the city was a key division point on its New York-Chicago main line and the Big Four's terminal for main lines southwest to Cincinnati, Indianapolis, and St. Louis. Pennsy came second with its busy line southeast to Pittsburgh and a secondary route southwest to Columbus. So, not surprisingly, the city's busiest passenger station was the one the NYC and PRR shared—the 1866 Union Depot, at the foot of West 6th Street on Central's main line along the Lake Erie shore.

This structure was also not only Cleveland's most decrepit and over-

O. P. VAN SWERINGEN'S TERMINAL building plan of 1918. It shows a new Cleveland along Ontario Street from Public Square to Orange Avenue. Little deviation has been made from the plan, as far as the project has developed.

CLEVELAND PLAIN DEALER; CLASSIC TRAINS COLLECTION

In 1918, the Vans' plans for downtown development included grand buildings along Ontario Street (above). The structures over the terminal (right) were built as then envisioned, but with a much taller tower.

crowded station, but one of the worst in the Midwest. At its post-Civil War opening, Union Depot handled 25 scheduled trains a day. By 1916 its joint owners were pushing about 95 scheduled trains through its grimy, gloomy, architecturally unfashionable hulk—plus multiple sections, extras, and all the needed switching moves. It was so dismal that one Cleveland businessman erected a billboard facing the Union Depot's detraining passengers proclaiming "DON'T JUDGE THIS TOWN BY THIS DEPOT." The four secondary carriers each had its own newer station, but all were inconveniently located at varying levels below the city's business district.

Grand plans, but little action

Back in 1902, the hyperkinetic Tom L. Johnson, Cleveland's legendary reform mayor, entranced by the "City Beautiful" ideals of the 1893 Columbian Exposition, had hired the fair's principal designer, the renowned Chicago architect Daniel H. Burnham, to lay out a broad civic mall stretching from the Public Square north to the lakefront. Classically styled buildings would be arrayed along the mall, and anchoring its north end would be a grand new Beaux-Arts union station, overlooking the lake near the disheveled Union Depot.

The first governmental structure opened in 1910, and two others soon followed, but an unrelated legal fight with New York Central delayed the new station, leaving the mall's vacant north end opening onto a fine vista of Lake Erie and not much else.

All of which was no matter to the Van Sweringens. In 1911 they quietly added more property to their Public Square site, and the constantly creative and expansive O.P. now envisioned a facility that would not only accommodate his Shaker Heights rapid transit line, but also Cleveland's four lesser railroads, its interurban lines, an office building, and hotel. Typical of O.P., the station plan underwent various changes, but it essentially remained a stub-end terminal approached only from the east.

But nothing much happened. The railroads were lukewarm, and there was yet no money for the other buildings. (Throughout their careers, the Vans were masters at creating methods of using other peoples' money while controlling the enterprises themselves.) Looking to the future, they incorporated their rapid transit project in 1911 as the Cleveland & Youngstown Railroad, and began acquiring right-of-way, although again there was no capital for what promised to be costly construction.

What made the railroads wary of the Vans' Public Square location was its difficult topography. Downtown Cleveland sits on high ground bordering the deep Cuyahoga River valley, which bisects and separates the city. The B&O and the Erie were on the valley floor, about 80 feet below the site; Nickel Plate and W&LE were better positioned halfway up the hillside, but getting them to the Square required property condemnation and heavy work.

Such was the situation in 1913, when the brothers had a fateful meeting. While expanding their country retreat, they purchased a farm from the widowed sister of one Alfred H. Smith. The energetic, aggressive, and charismatic Smith was then New York Central's senior vice president, and soon its president. Smith himself handled the sale, but then proceeded to pump the brothers about their yet-unconsummated rapid transit project.

It turned out that he needed a right-of-way to reach a planned new high-capacity freight terminal on the high ground near the city's center. Because of local political animosities and fears of property price gouging, however, he thought of building the line in someone else's name. Who better than these two innocuous local entrepreneurs who had located their planned rapid transit line over roughly the same route that the Central needed?

From real estate to railroads

Despite their personality differences, Smith and O.P. shared many essential traits—vision, creativity, and an expansionist nature—and the two bonded and quickly agreed to use one another. By foresighted design, the Vans' Cleveland & Youngstown had a steam railroad charter, so it became the nominal builder of a joint NYC-rapid transit route, using some right-of-way it had already acquired. Central, in turn, would "advance" all needed construction funds to the C&Y. Thus, essentially at the Central's expense, the Vans got a heavily built, high-speed line from Shaker Heights to a point just a mile and a half short of the Public Square. Delayed by

World War I, the project was finally completed in 1920, and by using some city streetcar trackage, Shaker trains could now run to the Square.

That project had barely begun when Smith found he had a far greater need for his new friends. The 1914 Clayton Act required the Central to dispose of its long-standing control of the Nickel Plate, then a single 523-mile line paralleling the Central between Buffalo and Chicago. That put Smith in a serious quandary. Selling it to any competitive or connecting line—or to some outside speculator—would clearly hurt his railroad. To minimize the damage, he needed a trustworthy buyer that could keep the Nickel Plate financially stable and firmly independent. Knowing O.P.'s talents and temperament, he had the right man, and the Vans' need for a short stretch of Nickel Plate right-of-way to get the Shaker line nearer the Square provided a plausible cover story of why the brothers might want the railroad.

That story is its own. Suffice it to say that in 1916 the brothers bought control of the Nickel Plate, which in turn led them into a vast new world. With Smith's strategic guidance, financial connections, and other *sub rosa* help, the Vans soon acquired the makings of a major Eastern railroad system that by 1924 included the Clover Leaf Route to St. Louis; the Lake Erie & Western (another NYC castoff) to Peoria, Ill.; the Chesapeake & Ohio; the Erie; and the Pere Marquette. More would follow.

At the time they got into the railroad business in 1916, however, the brothers were still mostly stymied at the Public Square. Ever optimistic, O.P. began building the 1000-room Hotel Cleveland, still hoping that some of the lesser railroads would commit themselves to the terminal that would anchor his planned complex. Aside from his own Nickel Plate, though, none had.

Then came Mr. Smith again. By early 1918, with the U.S. in World War I and the government running the railroads, Smith was on loan to the USRA as its eastern region director. In that role he suddenly proposed that all of Cleveland's railroads, including the New York Central lines, use the Vans' Public Square site for a true union station. His motive, so he said, was facility unification and efficiency—but one could never ignore his close relationship with the brothers.

Smith commissioned an engineering study which, given the person ordering it, unsurprisingly produced a favorable report. Privately, the engineers were aghast. True, its location right in the heart of town was, commercially, the best possible spot. But compared to Tom Johnson's lakefront plan, it promised to be absurdly expensive. It would require extensive new access lines, including some heavy grading. About 1000 buildings had to be razed, streets realigned, and overpasses built. The topographical difficulties already mentioned would be compounded by the need for a long viaduct over the Cuyahoga valley. The site itself was cramped and lay partly on the steep hillside, and the whole thing would have to be electrified. But Mr. Smith and the Vans wanted the station on the Public Square, and that was that. (Also not surprisingly, Pennsy wanted no part of it.)

Central adds momentum

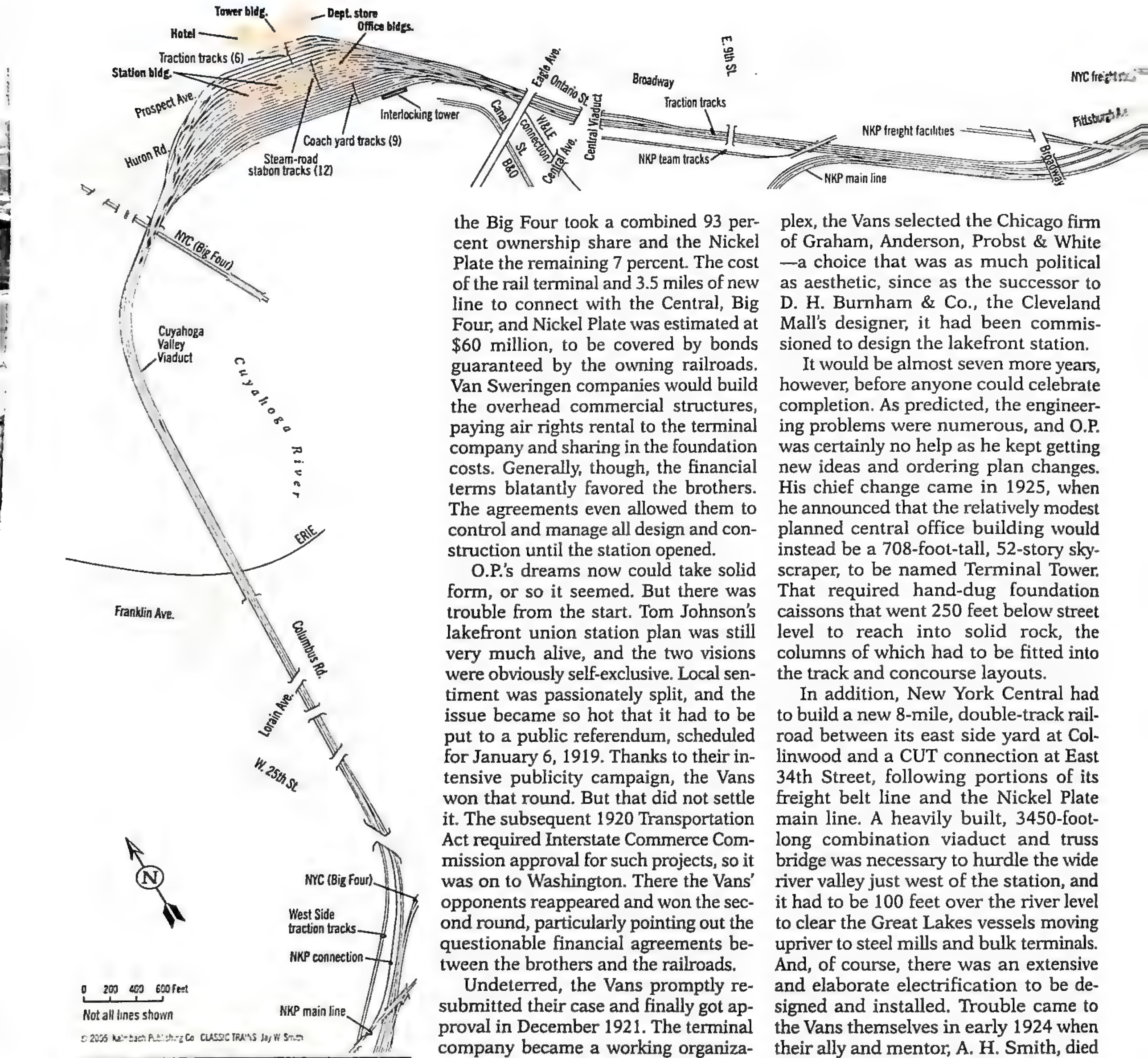
The Central's promised presence changed everything for O.P., whose vision widened once again. With the station plan enlarged and space for eight buildings available above it, he now planned a fully integrated urban center. Besides his almost-completed hotel, there would be several office buildings, a large department store, a post office, and a variety of stores and restaurants —all built on air rights over the terminal. And in effect, the Central—clearly to be he station's largest user—would provide the physical and financial underpinnings for the entire project.

In April 1918 the Vans created the Cleveland Union Terminals Co. to build and operate the station. (The odd plural probably referred to its intended multiple roles as a railroad, rapid transit, and interurban terminal.) Note that initially it was strictly a Van Sweringen company, with no direct railroad involvement. That arrangement soon changed. In 1919, and now back in his old job, Smith committed New York Central to the project, and of course, the Vans' Nickel Plate did likewise. But the other railroads still kept their distance, with the Pennsylvania emphatically opposed and the B&O, Erie, and Wheeling still noncommittal. Should they ever enter, though, those three wisely wanted only to be tenants, not co-owners.

The result was that the Central and

An aerial view looking northeast made just before CUT's formal opening shows the Hotel Cleveland (left center), Terminal Tower (center), and the "Prospect Avenue group" of office buildings (right). Station facilities are below street level across Prospect from the tower, with the upper portion of the concourse fronting on Huron Road. Lake Erie is at top left, Cuyahoga River at lower right.

HERBERT H. HARWOOD JR. COLLECTION



Heavy work was needed to get tracks to the Public Square and over the Cuyahoga. Electrics ran from Collinwood to Linndale.

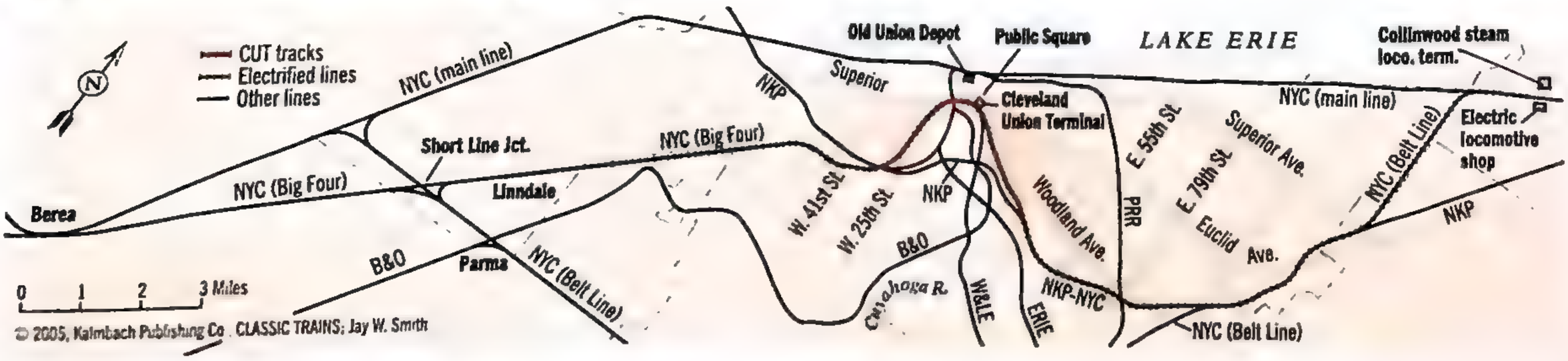
the Big Four took a combined 93 percent ownership share and the Nickel Plate the remaining 7 percent. The cost of the rail terminal and 3.5 miles of new line to connect with the Central, Big Four, and Nickel Plate was estimated at $60 million, to be covered by bonds guaranteed by the owning railroads. Van Sweringen companies would build the overhead commercial structures, paying air rights rental to the terminal company and sharing in the foundation costs. Generally, though, the financial terms blatantly favored the brothers. The agreements even allowed them to control and manage all design and construction until the station opened.

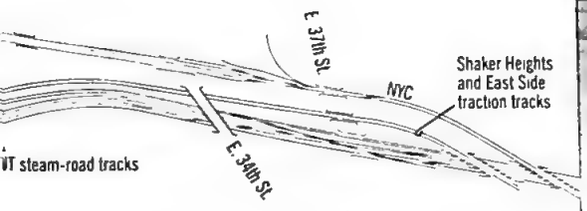
O.P.'s dreams now could take solid form, or so it seemed. But there was trouble from the start. Tom Johnson's lakefront union station plan was still very much alive, and the two visions were obviously self-exclusive. Local sentiment was passionately split, and the issue became so hot that it had to be put to a public referendum, scheduled for January 6, 1919. Thanks to their intensive publicity campaign, the Vans won that round. But that did not settle it. The subsequent 1920 Transportation Act required Interstate Commerce Commission approval for such projects, so it was on to Washington. There the Vans' opponents reappeared and won the second round, particularly pointing out the questionable financial agreements between the brothers and the railroads.

Undeterred, the Vans promptly resubmitted their case and finally got approval in December 1921. The terminal company became a working organization in January 1922, with the Central's Henry Jouett as chief engineer; formal groundbreaking followed in September 1923. As architects for the unified complex, the Vans selected the Chicago firm of Graham, Anderson, Probst & White —a choice that was as much political as aesthetic, since as the successor to D. H. Burnham & Co., the Cleveland Mall's designer, it had been commissioned to design the lakefront station.

It would be almost seven more years, however, before anyone could celebrate completion. As predicted, the engineering problems were numerous, and O.P. was certainly no help as he kept getting new ideas and ordering plan changes. His chief change came in 1925, when he announced that the relatively modest planned central office building would instead be a 708-foot-tall, 52-story skyscraper, to be named Terminal Tower. That required hand-dug foundation caissons that went 250 feet below street level to reach into solid rock, the columns of which had to be fitted into the track and concourse layouts.

In addition, New York Central had to build a new 8-mile, double-track railroad between its east side yard at Collinwood and a CUT connection at East 34th Street, following portions of its freight belt line and the Nickel Plate main line. A heavily built, 3450-foot-long combination viaduct and truss bridge was necessary to hurdle the wide river valley just west of the station, and it had to be 100 feet over the river level to clear the Great Lakes vessels moving upriver to steel mills and bulk terminals. And, of course, there was an extensive and elaborate electrification to be designed and installed. Trouble came to the Vans themselves in early 1924 when their ally and mentor, A. H. Smith, died in a horse-riding accident—although by then the Central was committed to the terminal. Smith's successor, Patrick Crowley, had to see it through.





One final problem was a bit of commercial blackmail. As the Vans continued expanding their railroad empire during the late 1920's, they found themselves battling another Clevelander, Frank Taplin, for control of the Wheeling & Lake Erie. Taplin controlled the Pittsburgh & West Virginia, a W&LE eastern connection, and he owned a large stake in the Wheeling itself and hoped to put together his own Eastern rail system. By chance, the Wheeling's Cleveland passenger station lay directly in the path of CUT's eastern approach, which was well under way in 1928, and the W&LE depot was condemnation-proof. Taplin grabbed the opportunity and persuaded W&LE's directors to hold out for an absurdly inflated price. A five-month delay ensued while negotiators worked out the solution.

Grand opening, without the Vans

The agony ended on June 28, 1930, when 2500 railroad executives, civic leaders, and political dignitaries assembled in the terminal's marble concourse for the grand opening. (Actually, the Big Four had scheduled two steam-powered trains each way in and out of the station beginning on January 1, 1930, probably to help break it in.) True to their fashion, the Vans were nowhere to be seen; they had retreated to their country estate to hear the affair on the radio.

What the gathering celebrated was a two-level underground through station, reached from the Square via five 35-foot-high arched entryways that opened into a grand, vaulted portico, with seven murals on its north wall and the peak of its ornamented ceiling reaching 47 feet from the floor—all of which doubled as the Terminal Tower's entrance and lobby. From there, four ramps led down to the station concourses.

The terminal's layout carefully separated the flows of railroad and rapid transit passengers so they would not intermingle and bog down. The center two of the four main entrance ramps led straight ahead into to the wide steam-railroad concourses, ticket windows, and waiting room. On each side of these two ramps was a ramp to a pair of flanking "traction concourses." These were to handle patrons of the Shaker Heights "rapid," the Vans' planned city-wide rapid-transit system, and the interurbans that would use rapid-transit tracks to reach the terminal. A mysterious "U"-shaped passageway connected the north ends of the two traction concourses, but was used by nobody and seemed to have no purpose. One of the terminal's perennial ghosts, it was meant as the direct link to a future underground streetcar terminal beneath the Square.

Along the walls of the concourses was a variety of retail stores—a large drug and sundries store, a sandwich shop, a tea room, a candy shop, a toy store, men's and women's clothing stores, a bookstore, a 22-chair barber shop, and a large lunchroom—all dignified by decorative bronzework around their doors and windows, bespeaking Van Sweringen taste. Finally there was the Oak Room, a first-class formal restaurant with an entry lounge, elaborately decorated high plaster ceiling, and imported Sherwood Forest oak paneling—another Van Sweringen touch. The Oak Room was only partly intended for rail passengers; it quickly became one of

HERBERT H. HARWOOD JR.

A February 1962 photo shows the terminal's main concourse after installation of a new ticket office in a portion of the waiting room. Low walls surrounded the stairways that led down to track level.

CLEVELAND PLAIN DEALER

Union Terminal Section June 29 1930

New Station's Facilities Finest in the World

A 32-page supplement to the *Cleveland Plain Dealer* issued when CUT opened included renderings of the main concourse and the east rapid transit concourse.

CLEVELAND PLAIN DEALER; CLASSIC TRAINS COLL.

NYC train 234 passes two East Side rapid trains as it heads away from CUT in June 1960. NKP's main line is in the foreground, its freight terminal in the background.

Cleveland's premier dining spots. The Fred Harvey company operated all the terminal concessions, its first and only venture east of Chicago.

Being below ground, generally with 20½-foot ceilings, much of the terminal felt a bit claustrophobic despite the wide, bright concourses. But the main railroad concourse's vaulted roof rose to a peak of 42 feet, with huge chandeliers and an airy skylight—the only visible sign of the station from outside.

Beneath the concourses was provision for 22 tracks. Separated at the terminal's north end were to be 6 traction tracks, 4 served by high-level rapid transit platforms. The Shaker Heights line, "temporarily" the only user of this area, built a low-level loop terminal next to the high platforms. North of the Shaker loop, space was left for 4 more traction tracks, complete with stairways. The entire terminal project, in fact, was built with elaborate rapid

After an Indians game, Nickel Plate 4-6-4 175 pulls out of the terminal with a baseball special returning fans to Buffalo in July '57.

THREE PHOTOS: HERBERT H. HARWOOD JR

At Linndale, west end of the CUT electrified zone, motor 219 has turned NYC train 407, the *Cleveland-St. Louis Special*, over to Hudson 5271. It's September 1953, and the wires will soon be de-energized.

transit facilities. The entire east side of the Vans' cross-city transit line, following the CUT-NKP-NYC tracks, was virtually finished, with bridges, catenary towers, the rudiments of stations, and part of one track laid. Between the terminal and East 55th Street, all facilities were built for four tracks to accommodate the East Side and Shaker routes plus the Akron interurban line (only two were ever laid). Inside the terminal's eastern rapid transit portals was an elaborate underground flying junction designed for an uptown subway extension. To the west, the Cuyahoga viaduct was built to carry a double-track rapid transit extension to Lakewood.

On the other side of the wall separating the traction facilities were six low-level platforms serving 12 steam-railroad tracks. Alongside these were 10 service tracks: a single runaround track and a 9-track coach yard. Following the Van Sweringen principle that business can only grow, it was intended that the steam concourse eventually would be extended over the coach yard to provide additional platform space.

Oak paneling and D.C. catenary

Above the station's unifying framework was the soaring Terminal Tower—ever afterward Cleveland's symbol—the hotel, a group of three 18-story office buildings, and, added in 1931, the Higbee Company department store, one of the finest in the Midwest. At the top of all that, in spacious, adjoining oak-paneled offices on the Terminal Tower's 36th floor, O.P. and M.J. Van Sweringen presided over the country's largest railroad conglomerate, which now included the Missouri Pacific-Texas & Pacific system, the Chicago & Eastern Illinois, and the Wheeling & Lake Erie—as well as an ever-growing real-estate empire.

The terminal electrification stretched 17 miles between New York Central's large Collinwood yard on the east and Linndale station on the west—all except the 3.5 miles of CUT trackage on new or rebuilt Central and Big Four lines. The overhead catenary delivered 3000 volts D.C. to 22 utilitarian-looking but graceful General Electric 2635 h.p. box-cab 2-C+C-2 electric locomotives, painted in NYC's traditional black and lettered CLEVELAND UNION TERMINAL. These big motors, incidentally, were the grandfathers of the Pennsylvania Railroad's superlative GG1's, and in fact were never meant as mere terminal switchers. Geared for 70 mph and originally equipped for multiple-unit operation, they were designed for an eventual NYC mainline electrification.

A new electric shop was built at Collinwood, where all Central trains changed power in the yard; at Linndale, steam and electric locomotives were swapped during the station stop. Steam power was serviced at both points. Nickel Plate trains exchanged engines near East 40th Street and at West 38th. Locomotives of its through trains ran light between the two points over Nickel Plate's freight main line, which crossed the Cuyahoga valley on a spindly bridge-trestle combination. NKP power terminating at Cleveland was serviced at the road's small East 75th Street facility.

In addition, the Central and Nickel Plate built a new joint station at Euclid and Superior Avenues in East Cleveland, where all trains stopped to serve the growing East Side and Heights suburbs. A station for the Vans' East Side rapid transit line conveniently adjoined the commodious brick structure.

The total cost of the railroad terminal, electrification, and all the approach work, shops, and new stations totaled $128 million—an immense sum in 1930. Of that, $88 million went for the CUT facilities—46 percent above the original estimate—and the railroads themselves paid out $40 million for their own property improvements. Added to that was $20 million for the rapid transit work done thus far, and $31 million for the Van Sweringens' air-rights buildings (which did not include the later department store and post office). In all, the project came to $179 million.

The human cost went to the top, too. The New York Central vice president responsible for overseeing the project died prematurely of ulcers and heart failure in 1926—brought on by the constant engineering challenges and relentlessly climbing costs.

Sadly too, 1930, the year following the stock market crash, was not the year to open a costly, high-capacity railroad terminal. CUT instantly became a heavy burden to its now-beleaguered owners, who, in one way or another, had to cover everything. The anticipated air-rights income also turned ques-

In December 1954, after CUT's electrics were replaced by diesels, CUT GP9 5901 helps NYC J-3a 5414 with train 433, the *Cleveland-Cincinnati Special*, up the 1.56 percent grade on the Cuyahoga viaduct.

tionable as the deepening Depression devastated the Van Sweringens' shaky empire, which the brothers struggled to keep intact. Work on the almost-complete East Side rapid transit line abruptly stopped, and with the region's interurbans either dying or already dead, most of the traction facilities lay vacant. Many of the Fred Harvey concourse concessions were closed or consolidated. With only the Shaker Heights line operating, the west traction concourse was closed off, its vacant storefronts eventually occupied by CUT's engineering office.

Needless to say, except for the Higbee store and the 1934 central post office, none of the Vans' other planned air-rights buildings materialized. Ultimately it was no matter to them. Physically and emotionally exhausted, the brothers themselves died prematurely only 11 months apart in 1935 and 1936.

Central and NKP, then B&O and Erie

When the terminal's doors opened, they did so only to CUT's two owners. B&O stayed in its 1898 Canal Road station, as did Erie in its grimy terminal under the Detroit-Superior Bridge. As a byproduct of the Taplin dust-up, CUT graded a connecting line for the W&LE, but the Wheeling wanted no part of the expensive palace for its two humble local trains, which were living on borrowed time anyway. Initially, W&LE used the Erie station before cutting back to its Commercial Road freight house. Pennsy stubbornly stayed put at the decomposing Union Depot, although most passengers used its large and ornate east-side station on Euclid Avenue at East 55th Street, which PRR would eventually make its endpoint. Nonetheless, an eternally vacant access ramp had been built on CUT's south end, ready for the day when Philadelphia changed its mind . . . which never came.

Not all NYC trains entered the terminal, of course. The regal *20th Century Limited* always disdained Cleveland, bypassing CUT by way of the Central's faster lakefront main line, although a nightly two-car terminal shuttle train exchanged mail with the *Century*'s RPO at Collinwood. At various times too, the *Commodore Vanderbilt*, *Ohio State Limited*, and *New England States* skipped stops at Cleveland.

Baltimore & Ohio finally became the first CUT tenant in 1934, although getting there was not easy. To reach CUT from its valley-floor line, B&O was forced to use its steep and awkward Nickel Plate freight interchange track that climbed the hillside, which required a switchback before CUT electrics could take over at East 9th Street. The frugal Erie stuck to its old station through World War II, finally forsaking it for CUT in 1949. Its low-cost connection joined CUT near East 34th Street, using vacant bridges and grading built for the Vans' planned four-track rapid transit main line. Concurrently the Erie dieselized its Cleveland passenger operations, so it had no need for the CUT motors.

If the terminal's financial burden was nightmarish, operating the facility was little better. The relatively short electrification was highly inefficient and expensive. Much of the station and coachyard trackage was on curves, making couplings difficult and sometimes harsh. Worse, westbound trains leaving the station immediately hit a 1.56 percent grade over the Cuyahoga viaduct. Since the coachyard adjoined and paralleled the platform tracks, it had to be switched from the two terminal throats, creating congestion in busy times—one reason for the terminal's 576-lever interlocking plant, the country's largest when it was built. And since there was no nearby turntable or wye, cars needing turning had to be hauled 8 miles southwest to New York Central's Short Line Junction, a combined steam and electric movement that required duplicative power and crews.

Nonetheless, CUT remained vibrant well into the 1950's. From a mid-1940's peak of 94 scheduled trains, it was still handling a respectable 65 in summer 1953—to which were added numerous baseball and other specials. On June 14, 1953, for example, no fewer than 16 raucous baseball trains entered the station, their passengers destined for Indians game in the mammoth Municipal Stadium on the lakefront.

But then started the all-too-familiar painful, lingering death. Electric operations ended in 1953, when CUT acquired four GP9's and three SW900's for switching and to handle the few remaining steam-powered trains; otherwise, each railroad's diesel road units ran through. Of note was that power shortages in the mid-1950's brought new excitement when steam locomotives came directly into the terminal, putting on a spectacular show as they fought that grade over the viaduct . . . and causing some embarrassment when Cleveland's smoke inspectors caught on. After NYC's Harmon, N.Y., shop successfully rebuilt one CUT electric motor for Central's 600-volt third-rail New York operations in 1951, the 20 other CUT survivors went to GE for a similar conversion in 1955. Afterward they became the backbone of Hudson and Har-

TWO PHOTOS: HERBERT H. HARWOOD JR.

Minutes out of the terminal in July 1961, NYC E7's soar above the Cuyahoga valley with train 35, the *Iroquois*, for Chicago. Airport rapid transit trains still run here.

lem Division intercity passenger and commuter services until Penn Central retired them during 1974-75.

The B&O took leave of CUT on January 4, 1963, when its lone remaining train, the three-car *Cleveland Night Express* for Washington, was mercifully killed. The last Nickel Plate-route service, by then under Norfolk & Western's name, ended on September 10, 1965. In 1968, the new Penn Central inherited the Cleveland Union Terminals Co. as just one more of its albatrosses. By the eve of Amtrak, the vast concourses were handling just nine PC trains in and out, plus a single Erie Lackawanna commuter run to Youngstown. Cleveland was left off Amtrak's first map, so on May 1, 1971, everything died. Well, almost everything. There still remained the faintest of pulses in EL's Youngstown train, which as a commuter run was outside Amtrak. The forlorn three-car train continued departing anonymously from the lonesome terminal until it finally expired—as a Conrail operation—on January 17, 1977.

Life after the trains

All the remaining Fred Harvey shops and restaurants also closed that year, although a few transit-oriented businesses partly took their place. As a final humiliation, indoor tennis courts were installed in the main concourse, and the track level was paved over as a parking lot. After a short-lived New York-Buffalo-Cleveland-Chicago *Lake Shore*—introduced May 10, 1971, but discontinued January 6, 1972, after its state funding was withdrawn—Amtrak in 1975 reappeared in Cleveland, with the *Lake Shore Limited* which continues today. Sensibly, however, both used the direct former NYC lakefront main line, not CUT. Ironically, the modest Amtrak station, which now also serves the Washington-Chicago *Capitol Limited*, stands almost directly opposite the long-deceased Union Depot.

All of which, however, did not mean the end of rail service at Cleveland Union Terminal. The busy Shaker rapid transit line and its PCC cars still remained, and in 1955 the Cleveland Transit System finally brought the Vans' nearly complete East Side rapid transit line to life. In the process, CTS reopened the west traction concourse, rehabilitated the high-level transit platforms, and laid tracks on the transit portion of the Cuyahoga River viaduct —all of them facilities that had lain fallow for a quarter of a century.

Otherwise, the terminal quietly crumbled until 1980, when the owners of the Terminal Tower and its satellite office buildings caught a bit of Van Sweringen vision and purchased it to convert to an upscale downtown shopping mall as part of its new and rehabilitated Tower City complex. The project got under way in 1986 but, sadly, required demolishing most of the station and rebuilding it. (Many of the terminal's fixtures were removed and preserved.) The rapid transit facilities were relocated, and the never-used Van Sweringen traction entrances and stairways disappeared. One vestige of the old order—the Oak Room—remains, hidden on one side of the new development; it currently is a catering facility.

The Tower City "Avenue," as it was called, opened to great local acclaim in 1990, and in 1996 the Greater Cleveland RTA's rapid transit network—"the Rapid," which reaches from the Cleveland Hopkins International Airport on the city's west side to East Cleveland and includes the Vans' two Shaker Heights lines—was expanded with a branch that loops north from CUT to go along the lakefront. The line serves the North Coast Harbor, the Rock and Roll Hall of Fame, the Great Lakes Science Center, the Amtrak station, the new Cleveland Browns football stadium, and the nightspots on the Flats East Bank, among other destinations. There is intermittent talk and planning to bring back intercity railroad service to CUT, too, although nothing has jelled. Then again, that was the situation in 1911, so one never knows. ■

PCC The wonder car

Faced with worn-out cars and falling ridership, electric railway leaders set out to design the perfect streetcar

By G. Mac Sebree

1935: PRESIDENTS CONFERENCE COMMITTEE FINALIZES ITS STREETCAR DESIGN

As the Roaring Twenties hurtled toward the big stock market crash, Americans were already deserting public transportation for the mass-produced automobile. Transit executives saw their ridership drop alarmingly, and wondered how to stem the tide. The streetcar was the dominant form of transit in cities of 50,000 and more, and there were some 74,000 cars in service.

Yes, there was trouble in Streetcar City. Of those 74,000 cars, fully 54,000 were worn out and obsolete. And with just a few exceptions, the rest were unattractive, unappealing, and no competition for the automobile.

A counter-attack was called for, and one was produced. In 1928, Charles Gordon, editor of the influential *Electric Railway Journal*, told the American Electric Railway Association that a new type of streetcar was urgently needed. He envisioned a streamlined car that would challenge the emerging motor bus; in short, a car with pizzazz.

In December 1929, acting on a plan authored by Gordon and the progressive Dr. Thomas Conway Jr., an ex-professor of finance who had rescued two major interurban companies, a group of operating executives formed the Electric Railway Presidents Conference Committee (ERPCC). The goal: come up with a revolutionary car by 1935.

The ERPCC comprised 28 operators, from Chicago Surface Lines with 3740 cars to Honolulu Rapid Transit with 78. Three interurbans joined, including Conway's Cincinnati & Lake Erie, but only one, Pacific Electric, bought cars.

Twenty-six industrial members, such as the St. Louis Car

J. Schmidt photo; Krambles-Peterson Archive

Toronto's well-maintained PCC fleet was the largest in North America. In July 1962, six of the cars stand outside Lansdowne Carhouse.

Krambles-Peterson Archive

During a 1934 transit-industry convention in Cleveland, four cars from the PCC development program pose on the Shaker Heights line. From right: ERPCC Model B 5300 (Pullman, 1934), Chicago Surface Lines 7001 (Brill, '34), CSL 4001 (Pullman, '34), and B&QT Model A 5200 (Twin Coach, '29).

Stephen D. Maguire photo; Krambles-Peterson Archive

Brooklyn & Queens Transit, home of the ERPCC's research lab, ordered the first production PCC's, in July 1935. Late in life, No. 1028 from that first order works a fan trip on October 27, 1956.

G. MAC SLBREE

W. C. JANSSEN PHOTO; KRAMBLES-PETERSON ARCHIVE

Most PCC owners ran their cars singly, but a few had them built with couplers for multiple operation. Two Boston cars (above) round the Riverside loop in 1963. Illinois Terminal's cars, like No. 453 entering St. Louis on a run from Granite City, Ill., in 1953, were double-ended *and* m.u.-capable.

Co. and Ohio Brass Co., were also included. Curiously, Twin Coach, a bus builder, also joined. It is interesting that, among ERPCC members, several, including Houston, Milwaukee, and Omaha, never bought any "PCC" cars, as the products of the committee's work came to be called. On the other hand, non-members such as Dallas and Minneapolis-St. Paul did.

FIRST ORDER OF BUSINESS for the ERPCC was to choose a chief engineer for the big project. Dr. Clarence F. Hirshfeld, head of the research department of the Detroit Edison Co., was hired and he lost no time in setting up a research laboratory in the Ninth Avenue car shops of New York City's Brooklyn & Queens Transit Corp.

Evaluated on the spot were advanced models from Chicago ("Rail Sedan" 3322, built in the Chicago Surface Lines shops in 1929 with multi-notch General Electric PCM control for smooth acceleration) and Baltimore (Peter Witt 6002, built by the J. G. Brill Co. in 1930 with Westinghouse VA control). Brooklyn car 5200 was also studied, one of three experimental cars built in the late 1920's by Twin Coach in a somewhat half-hearted attempt to crash the railcar market. It looked a lot like Twin's popular Model 40 bus, but with double trucks and steel wheels.

This led to a search for smooth, rapid acceleration, and a radical new truck that would subdue vibration and damp down the jolts and jars from rough track. GE and Westinghouse were commissioned to develop control systems utilizing a large number of resistance steps to replace the jerky motion produced by the typical drum controller then in almost universal streetcar use.

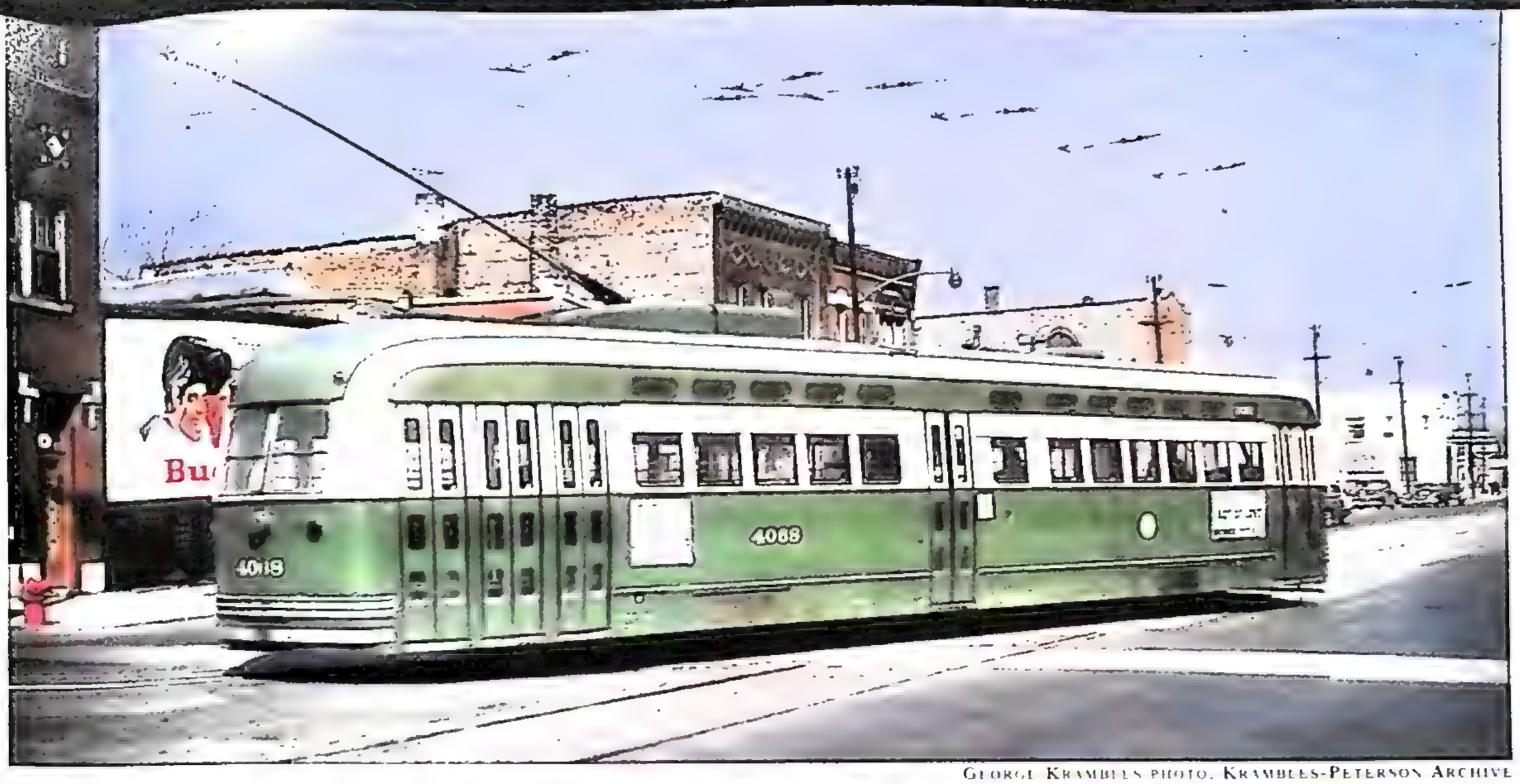
Hirshfeld's team quickly found that a resilient wheel, with a rubber insert, would reduce vibration and permit lighter trucks and carbodies. New concepts in controls, construction, and ways to adapt a standard carbody to permit varied lengths, widths, and single-end or double-end operation, all emerged on paper.

In early 1933, Brooklyn's 5200 (now called Model A) got the first prototype PCC trucks for testing, along with new-design motors and controls furnished by GE and Westinghouse. To try out a new body design, the ERPCC in early 1934 ordered a Model B from Pullman-Standard. It had a welded lightweight steel alloy body, and had thermostatically controlled ventilation and heating, plus glare-free indirect interior lighting. The main braking was with GE eddy-current brakes and featured the trademark magnetic track brakes seen on all subsequent PCC cars.

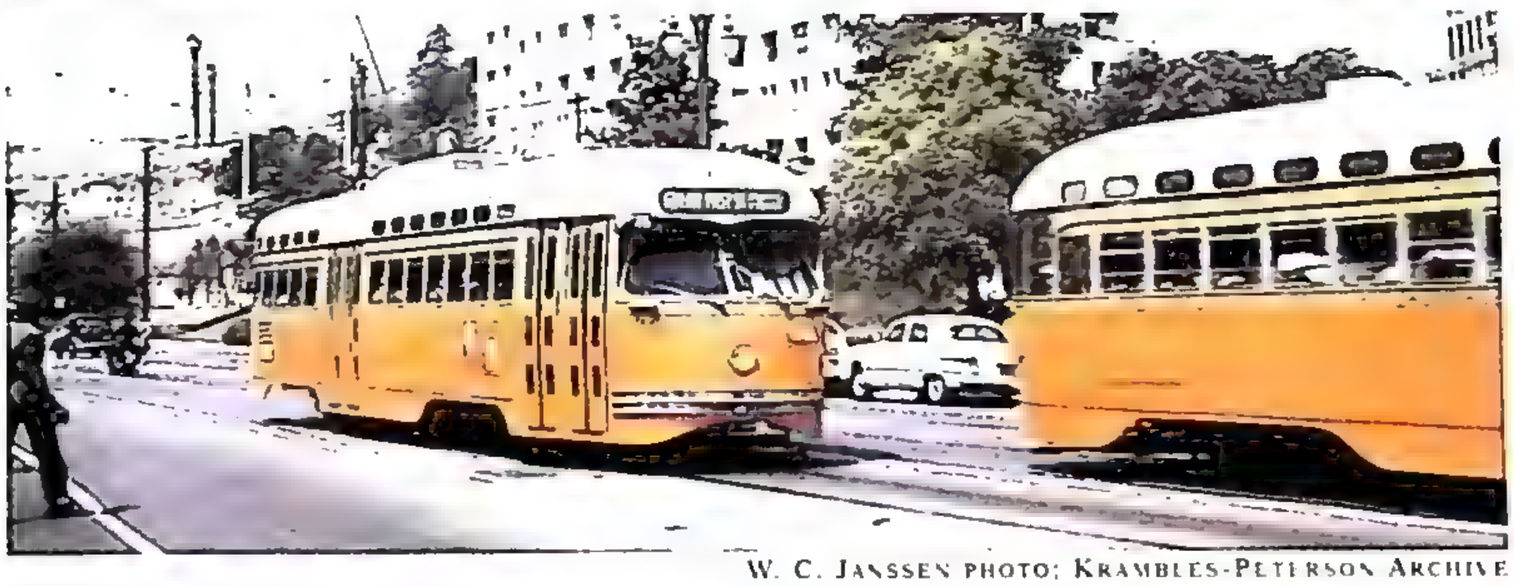
Model B was owned by B&QT as its 5300, and both it and 5200, the Twin Coach Model A, were tested in regular service. In contrast to the bus-like 5200, the 5300 had most of the body features of the production PCC cars, soon to come.

At long last, in February 1935, the ERPCC issued its final specifications for the new wonder car. It was to be a single-end, one-man car with a front entrance and center exit, 46 feet long and 8 feet, 4 inches wide. Some cities, particularly ones needing double-end cars, did vary from these specs. The car would have an empty weight of 32,000 pounds, use "floating" control, and have a maximum acceleration rate of 4.75 mph per second, a balancing speed of 42 mph, and a maximum safe speed of 50 mph. It would have dynamic, magnetic, and air brakes. The trucks would be of the new B-2 design, one that would endure, with variations, over nearly 40 years of streetcar production first in the U.S., then in Europe.

Not surprisingly, B&QT on July 8, 1935, ordered the first 100 production cars, 99 from St. Louis Car Co. and one from



GEORGE KRAMBLES PHOTO, KRAMBLES-PETERSON ARCHIVE



W. C. JANSSEN PHOTO; KRAMBLES-PETERSON ARCHIVE

C. RATHLESBERGER; KRAMBLES-PETERSON ARCHIVE

Chicago's 50½-foot, three-door "Green Hornets" (top) were the longest single-ended PCC's; most were rebuilt as rapid transit cars. Los Angeles (above) had some extra-wide PCC's that dwarfed their 3-foot, 6-inch-gauge trucks. San Francisco 1040 (St. Louis, '52) was the last domestic PCC built.

the Clark Equipment Co., which never built another car but which did build most of the PCC trucks in the U.S. The Brooklyn cars made their debut on October 1, 1936, with New York Mayor Fiorello H. La Guardia cutting the ribbon. The PCC era was under way.

The ERPCC was to retain tight control over the design. Having spent more than $630,000 to bring forth the new car, it organized the Transit Research Corp. to hold the patent rights. When PCC production ended in the U.S. in 1952, the TRC continued to collect royalties for PCC applications in rapid-transit cars and in overseas car production.

In all, 4902 PCC surface cars were built in the U.S., all except the lone Clark car by St. Louis Car Co. and Pullman-Standard. (Brill, the third major streetcar builder, eschewed PCC patents and managed to sell only 40 of its rival product, the Brilliner.) The only major design change came in the late stages of World War II when all-electric cars began to be produced, eliminating air brakes. And the carbody got a redesign, with length increased by 5 inches and "standee" windows introduced. The PCC was also popular in Europe. Although most bore little if any outward resemblance to the U.S. versions, about 500 or so were built in Western Europe, Pittsburgh with 666. Bringing up the rear were Johnstown, Pa., with 17 and Illinois Terminal, which had 8 double-enders for St. Louis suburban service. As systems were abandoned, many fleets were resold to other cities. Mexico City, which ordered only a sample car new, bought substantially the entire PCC fleets of Detroit and Minneapolis-St. Paul.

THE PCC CAR was hardly a failure, but at best it only postponed the demise of the vast majority of the traditional city streetcar systems. In the six years that it took to bring the car from concept to reality, more than half of the 74,000 obsolete trolleys had been retired, owing to the continued abandonment of transit by the public, the rising popularity of the motor bus, and the ravages of the Depression. All this greatly reduced the potential for the new car. Generally by this time, only the larger transit systems had the ridership or the means to support investment in new cars. Only 30 North American properties operated PCC's.

The wonder car turned out to be satisfyingly rugged; a few cities operated PCC's for a half century, bettering the longevity of the average clunker they replaced. Today, reconditioned PCC's work in a handful of cities, most notably San Francisco.

Missabe 2-8-8-4

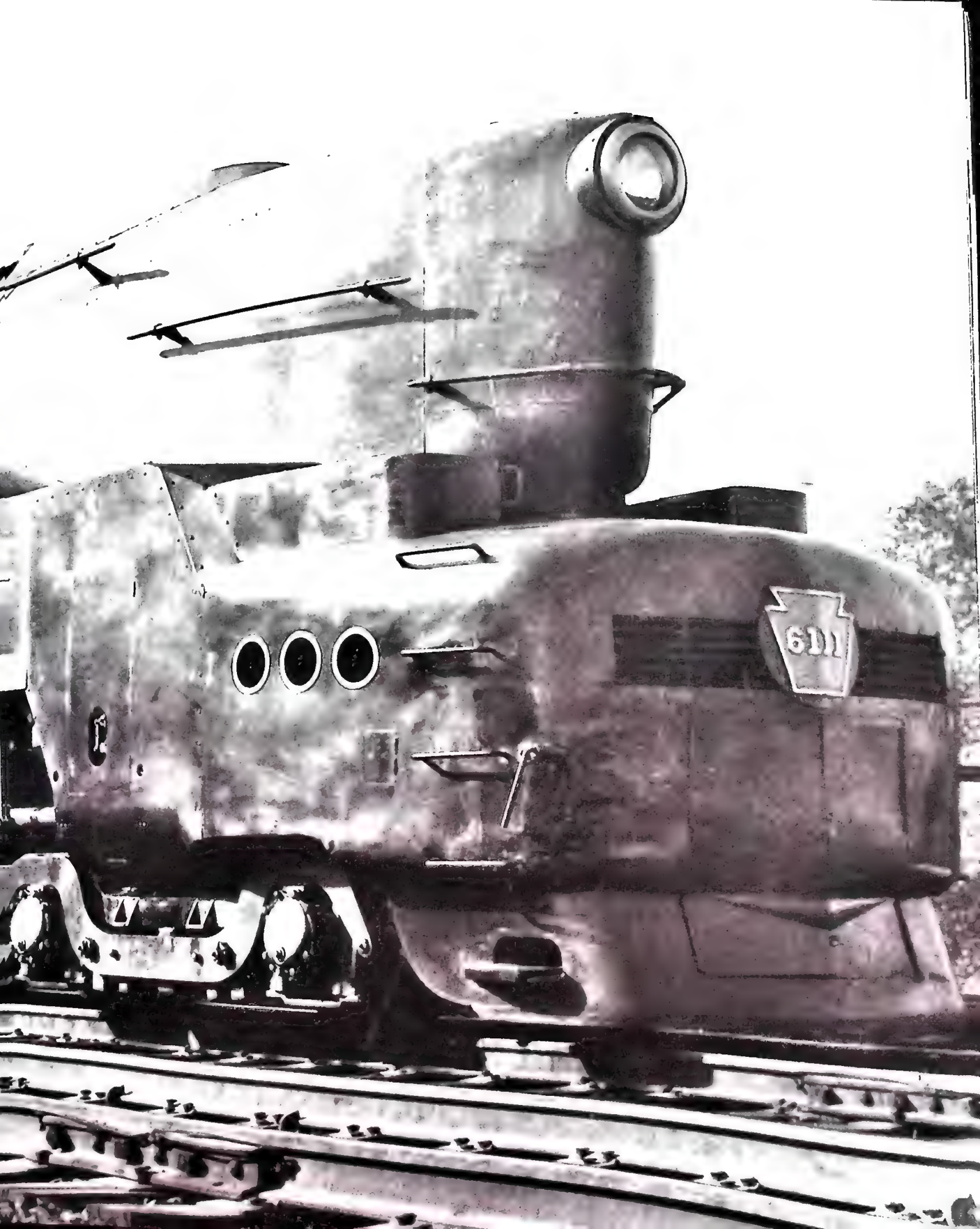
In 1940, with the economy picking up and world war on the horizon, the railroads ordered more locomotives—694—than in any year since 1929. Unlike in the Roaring Twenties, though, more than half the locomotives ordered were diesels (462, vs. 219 steam and 13 electric). Yes, the handwriting was on the wall for steam in 1940, but the first examples of five of the biggest, fastest, and most powerful designs were commissioned in that year. Here's Duluth, Missabe & Iron Range M-3 2-8-8-4 No. 227, one of eight built by Baldwin in 1941, with an iron-ore drag waiting to enter the yard at Two Harbors, Minn., in 1954. Adapted from a Western Pacific 2-8-8-2 design, the Missabe M-3's weren't the first Yellowstones (that was Northern Pacific 5000 of 1928), but they and their 10 M-4 sisters of 1943 were capable and long-lasting. By the end of their careers, which lasted until summer 1960, they were handling 18,000-ton ore trains unassisted—apparently a world record for steam.

PHILIP R. HASTINGS PHOTO

Pennsy T1

The K4s Pacific, the Pennsylvania Railroad's top passenger engine in the late 1930's, was fast, powerful, rugged—and outdated. Seeking a modern replacement, PRR in 1939 built the S1, a huge duplex-drive (two sets of cylinders and drivers on a rigid frame) with a 6-4-4-6 wheel arrangement. The S1 led to an order in 1940 with Baldwin for two similar engines, T1 4-4-4-4's 6110 and 6111, which arrived in 1942. Like the S1, they were styled by Raymond Loewy and equipped with poppet valves and roller bearings, but their "yacht-nose" prows were unique. Pennsy got 50 more T1's (with somewhat more restrained streamlining) in 1945-46—just before the road decided to go with diesels. Fast but flawed, the T1's were retired years before the last K4's ran. No. 6111 posed for a publicity photo at the Rockville Bridge near Harrisburg.

PENNSYLVANIA RAILROAD PHOTO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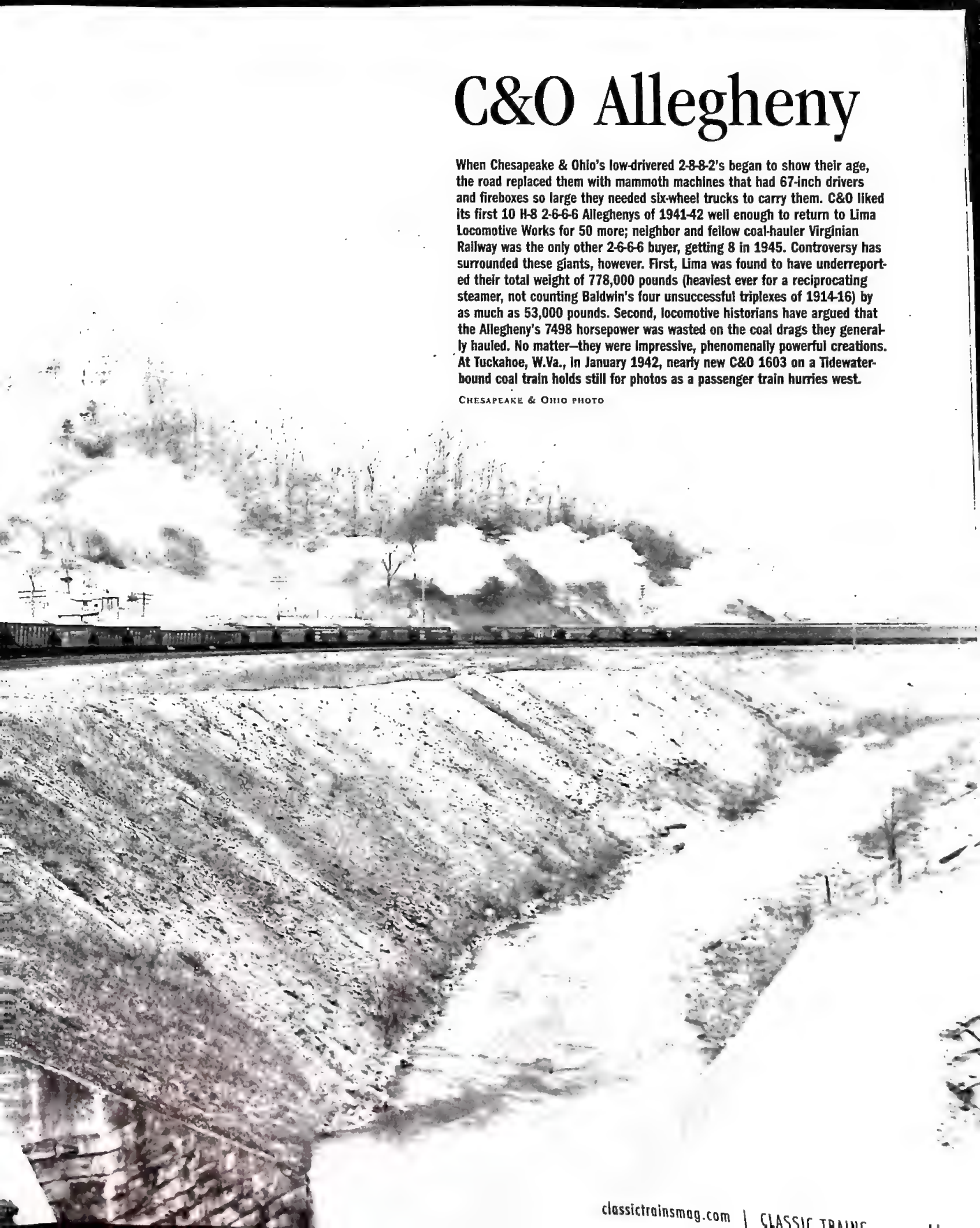
C&O Allegheny

When Chesapeake & Ohio's low-drivered 2-8-8-2's began to show their age, the road replaced them with mammoth machines that had 67-inch drivers and fireboxes so large they needed six-wheel trucks to carry them. C&O liked its first 10 H-8 2-6-6-6 Alleghenys of 1941-42 well enough to return to Lima Locomotive Works for 50 more; neighbor and fellow coal-hauler Virginian Railway was the only other 2-6-6-6 buyer, getting 8 in 1945. Controversy has surrounded these giants, however. First, Lima was found to have underreported their total weight of 778,000 pounds (heaviest ever for a reciprocating steamer, not counting Baldwin's four unsuccessful triplexes of 1914-16) by as much as 53,000 pounds. Second, locomotive historians have argued that the Allegheny's 7498 horsepower was wasted on the coal drags they generally hauled. No matter—they were impressive, phenomenally powerful creations. At Tuckahoe, W.Va., in January 1942, nearly new C&O 1603 on a Tidewater-bound coal train holds still for photos as a passenger train hurries west.

CHESAPEAKE & OHIO PHOTO



N&W class J

Norfolk & Western's class J combined power and speed to a greater degree than any other 4-8-4—perhaps any other steam engine, period. Drivers of 70-inch diameter gave them the ability to haul 15-car trains up mountain grades with ease, while superb counterbalancing and lightweight rods meant those relatively small wheels could do 110 mph without tearing things up. Plus, the J's could make a 676-mile run (longest on the N&W) without change *and* look good doing it, thanks to their tasteful streamlining. Like other modern N&W steam, the J's were designed and built by the road itself. Nos. 600-604 left Roanoke Shops in late 1941 and early '42; 605-610 came in 1943, without streamlining and other niceties because of wartime restrictions; and 611-613 hit the road in 1950 as the last steam passenger engines built for a U.S. common carrier. The 1943 engines were brought up to full J specs after the war to produce the vision of mechanical artistry on view here. War-baby 609 is at Williamson, W.Va., on tour with new *Powhatan Arrow* cars in 1950.

Norfolk & Western photo

609
609

UP Big Boy

Other engines may have been heavier, more powerful, or more perfectly suited to their jobs, but Union Pacific's 25 4-8-8-4s captured the public's imagination to an extent unlikely to be approached by a locomotive again. Perhaps it was their stirring name, chalked informally on the first of the class in 1941 by an anonymous Alco employee but soon embraced by their owner. No doubt it has helped that they were unique to the Union Pacific, an all-American road with a flair for publicity that has always likened doing things in a big way. And for those who see the 4-8-4 as "the king of steam arrangements" (as a British author once called it), the designation "4-8-8-4" has a certain unassailable connotation of size and symmetry. UP ordered Big Boys 4000-4019 in 1941, then got 4020-4024 in '44, to cope with the grade on its main line east out of Ogden, Utah. Later they were transferred to Sherman Hill, west of Cheyenne, Wyo., where they produced spectacles such as this until 1959.

Big 6

The last of a great line of geared locomotives keeps active hauling tourists in West Virginia

By Robert S. McGonigal

THINK "SHAY," and chances are what comes to mind is a wheezing, clanking, probably ill-maintained contraption that looks more like an overgrown sewing machine than a locomotive. Such beasts are often found in old glass-plate photographs, teetering on crude track, nearly dwarfed by mustachioed lumberjacks. A typical Shay owner might not even be in the railroad business, at least not as its primary activity.

You certainly wouldn't expect a Shay to be carried on the same books as 4-8-4's, Challengers, and F7 diesels. Yet that's exactly the company once kept by Western Maryland No. 6—the last and very nearly the largest of the 2770 Shays built by Lima Locomotive Works. WM No. 6 was special when she was built in 1945, and she's special today. Not only is she one of the lucky few to have escaped the scrapper, but she works regularly at West Virginia's Cass Scenic Railroad, where they call her "Big 6."

Ephraim Shay operated a sawmill north of Cadillac, Mich., in the 1870's. To supply his mill, he built a railway up into the forest. A horse pulled an empty car upgrade to where the trees were, but coming down with a load of logs was a problem. Shay reasoned that a locomotive would hold the heavy car back on the hill, and began using one. He soon found, though, that the engine tore up the track in a way the two-truck log car did not.

ROBERT S. McGONIGAL

Simmering at the Cass (W.Va.) depot, former Western Maryland Shay 6 is ready to leave with a tourist train for Whittaker Station in October 2004.

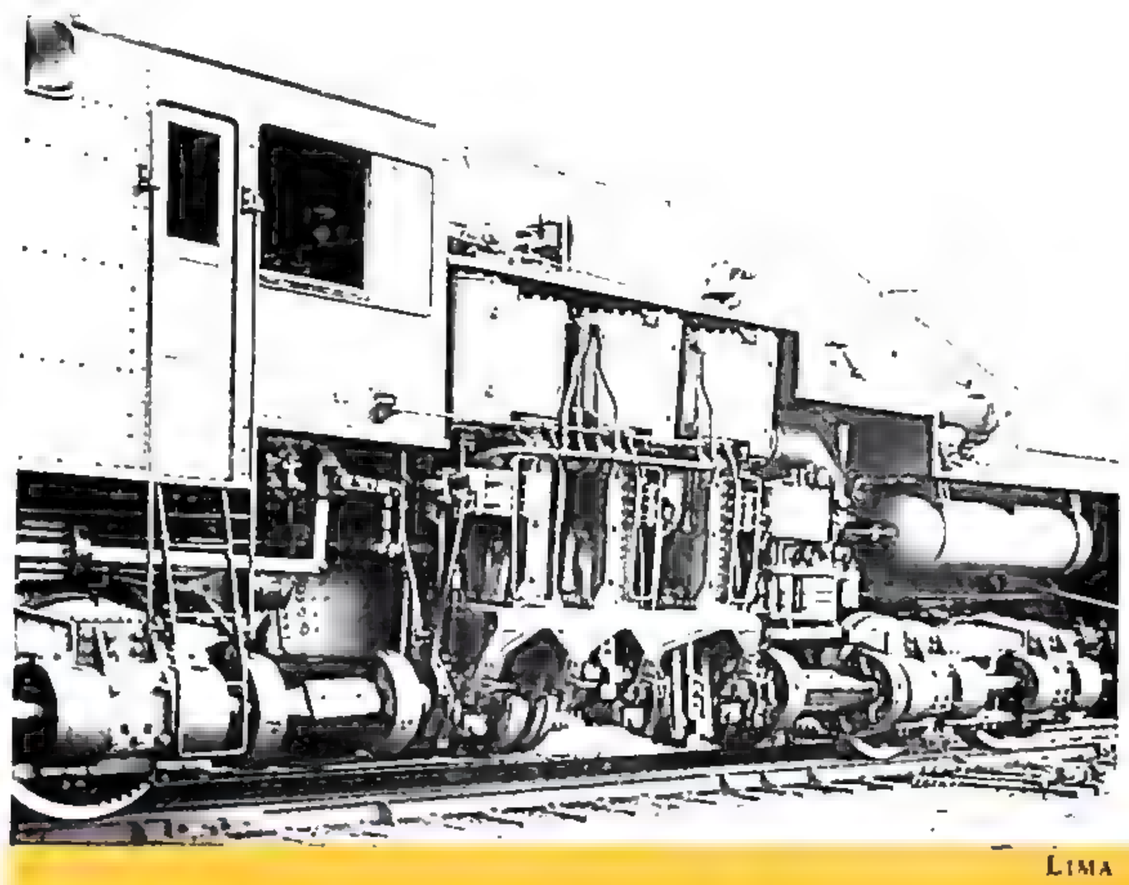
Shay could have addressed the problem by beefing up his track; instead, working with machinist William Crippen, he developed a new type of locomotive, one whose running gear resembled the log car's. As Shay used and refined his geared locomotive over the next few years, others took notice. When a neighboring lumberman asked Shay to build him a locomotive, Shay referred him to the Lima Machine Works in Ohio, which had assisted Shay in his experimentation.

Lima completed the engine in mid-1880. It consisted of a vertical boiler mounted on a two-truck flatcar, with two vertically mounted cylinders on the right-hand side. The cylinders powered a crankshaft below them, which was connected by sliding and universal joints to line shafts, which in turn were geared to the outer face of the four right-side wheels. A box for coal was at one end of the car, a water tank at the other.

Lima's John Carnes contributed to the design, but the basic concept belonged to Ephraim Shay, who received patent papers for it. Shay granted Lima the right to manufacture his locomotive, and by 1883 the builder was offering seven models weighing up to 18 tons. Indeed, it was the Shay that put

the firm in the locomotive business. In 1891, it moved its operations to a car works in Lima and became the Lima Locomotive & Machine Company. It began building rod engines for Class 1 railroads in 1911, and dropped the "& Machine" from its name the following year. The 1920's brought Lima's espousal of "Super-Power" road locomotives. Lima became the third-largest commercial steam-locomotive builder.

Advances quickly followed that first Shay of 1880. The boiler became horizontal, offset to the left with the cylinders and drive shaft on the right. Models were offered with three cylinders and three—and even four—trucks. Timber frames gave way to steel I-beams, then "girder" frames of plate steel and angle iron. Piston valves, superheating, and steel cabs were introduced. In 1911, sizes ranged from 10-ton toys to 150-ton four-truckers. Lima used a simple system based on total weight and number of trucks to identify its models: the "70-3," a common type, weighed 70 tons and had three trucks.



LIMA

Wearing flat gray with white trim for official photos, No. 6 shows off her giant cylinders. Cass has removed her distinctive running-board handrail.

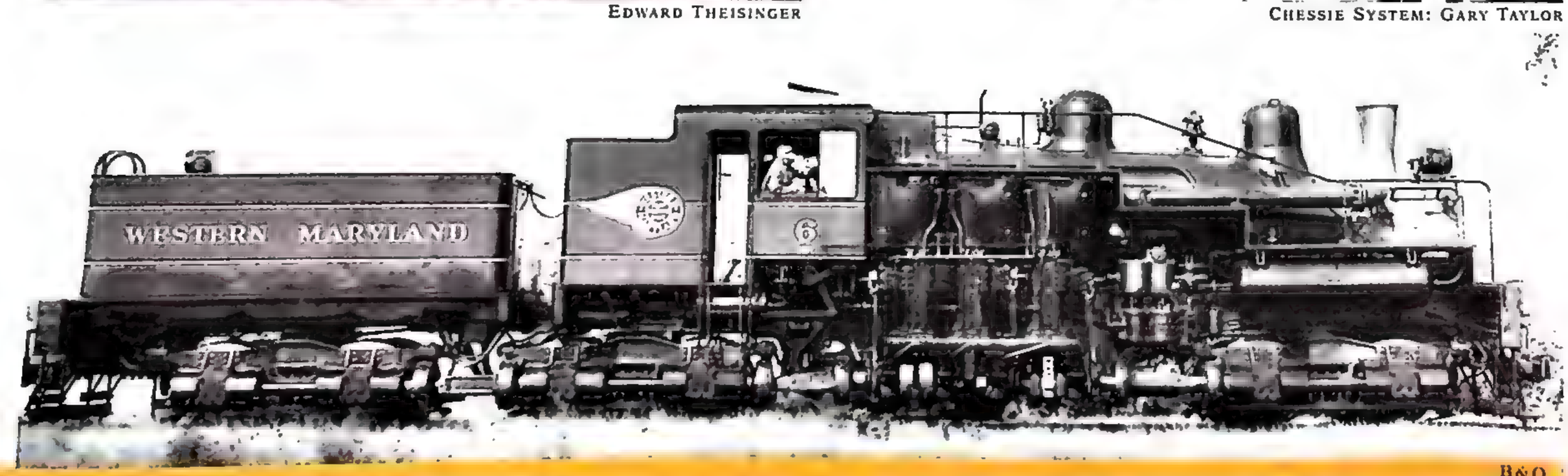
FLEXIBLE AND SURE-FOOTED, the Shay proved to be just the thing for logging railroads and other outfits with sharp curves, steep grades, rough track, and no need for speed. In addition, Shays were easy to work on—a real plus for operations with only one or two locomotives and rudimentary maintenance facilities. Sales hit 64 engines in 1890, sank with the economy in the 1890's, then soared to 217 in 1907, the peak year for Shay production. Decline of certain industries, and the shift from rail to truck operation in others, began to hurt sales in the Teens and Twenties. To spur orders and meet competition from the Willamette, a Shay-style locomotive popular with West Coast loggers, Lima in 1927 developed the "Pacific Coast" type. Essentially a souped-up 70-3, the PC was a good machine that came too late. By the Great Depression, demand for geared engines of all types had virtually dried up. Lima built only 6 Shays after 1930.

Though Shays were most at home working for loggers, mining outfits, and contractors, they also caught the attention of common carriers, including several big roads. In the dozen or so years after 1900, a handful of Class 1's sampled them, including Chesapeake & Ohio, which bought 16 big 150-4's. At least nine U.S. Class 1's—C&O, WM, Southern, Norfolk & Western, Kansas City Southern, Milwaukee Road, Baltimore & Ohio, New York Central, and Union Pacific, plus Canadian Pacific—owned Shays in the 20th century, although few lasted on those roads beyond the 1920's.

WM got its first Shay in 1906 when Lima delivered 150-4 No. 900. It worked as a pusher on the Black Fork grade.

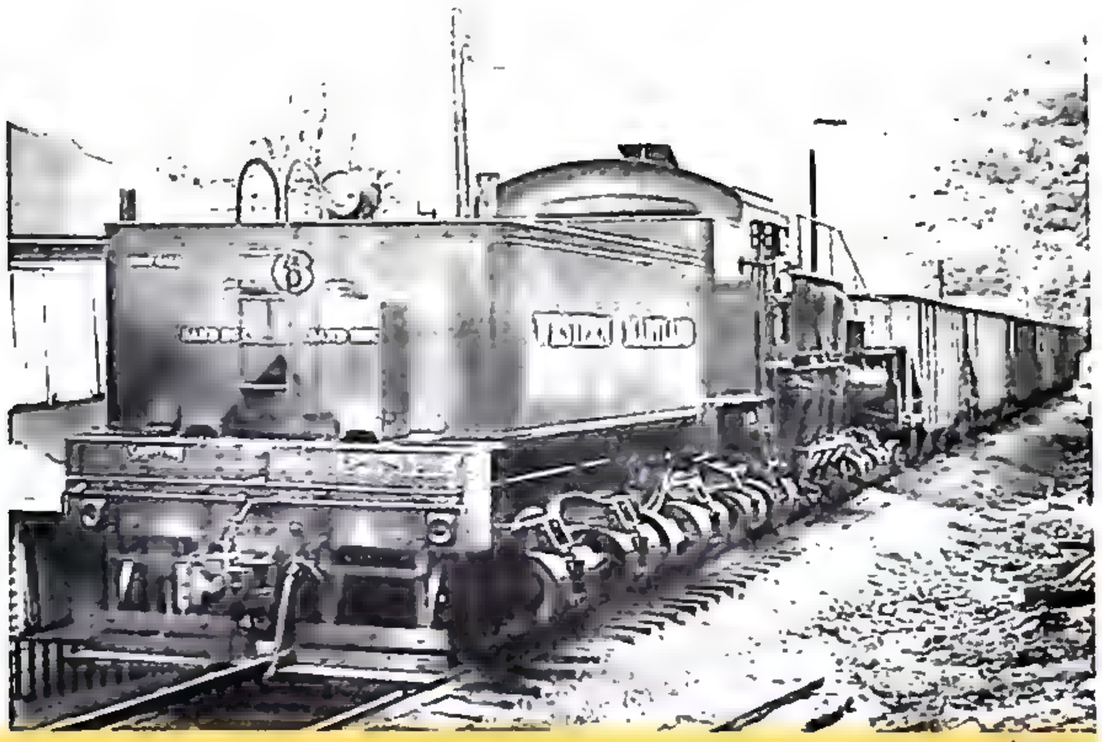
EDWARD THEISINGER

CHESSIE SYSTEM: GARY TAYLOR



B&O

WM No. 6 sits in the dead line (upper left) at Ridgely, W.Va., on March 16, 1952. The next year (above), spiffed up with striping and WM fireball herald, she's ready for the B&O museum. A compressed-air line to the safety valve allows her to back onto the museum turntable on August 19, 1980.



LIMA

Lima's last Shay jockeys a string of coal hoppers early in her brief career on WM's Chaffee Branch. Closure of the mine soon put her out of work.

Deemed too slow, it was sold to a Mexican road in 1910.

Western Maryland rejoined the Shay club in 1929, when it acquired the Chaffee Railroad, which left WM's Thomas Subdivision at Chaffee, W.Va., 41 miles west of Cumberland, Md., to serve the Three Forks Coal Co. mine at Vindex, Md. The Chaffee was short, just 3.1 miles, but it had vertigo-inducing 9.1 percent grades and dizzying 23.5 degree curves—perfect for Shays. When WM bought the Chaffee, it retained the little road's No. 4, a 70-3 built in 1918, and kept it on the branch.

No. 4 got company in 1932 when WM bought Greenbrier, Cheat & Elk No. 14, a 150-4 built in 1910 as C&O No. 11. With 302,400 pounds total weight and a tractive force of 52,200 pounds, it—as WM 5—ruled the Chaffee Branch until 1945.

In May 1943, with a world war on and its two Shays getting up in years, WM queried Lima about a new engine for the Chaffee Branch. Though WM at first asked about another four-trucker like No. 5, Lima suggested that, thanks to design improvements like those incorporated in the Pacific Coast Shays, a heavy three-trucker would do. WM tabled the matter for a time, then on May 9, 1944, placed what would be the very last order for a Shay. WM's final steam order came two years later, for 12 "Potomac" 4-8-4's from Baldwin.

IT HAD BEEN 5 years since Lima built a Shay, and the art had nearly been lost. With orders down to a trickle, the old Shay Shop had been given over to Lima's Shovel & Crane Division, so WM's engine took shape in the main locomotive erecting shop, where it shared the floor with War Department 2-8-0's and French 2-8-2's. The difficulty of fitting the oddball into the hectic wartime production schedule was magnified by the fact that the shop crews were completely unfamiliar with Shay construction. Much hand craftsmanship was involved. When mounting the cylinder castings on the boiler, for example, the surfaces of the castings were sanded flat by hand, a very precise job. Shop crews, paid on a piecework basis, saw the lone, labor-intensive Shay as a nuisance.

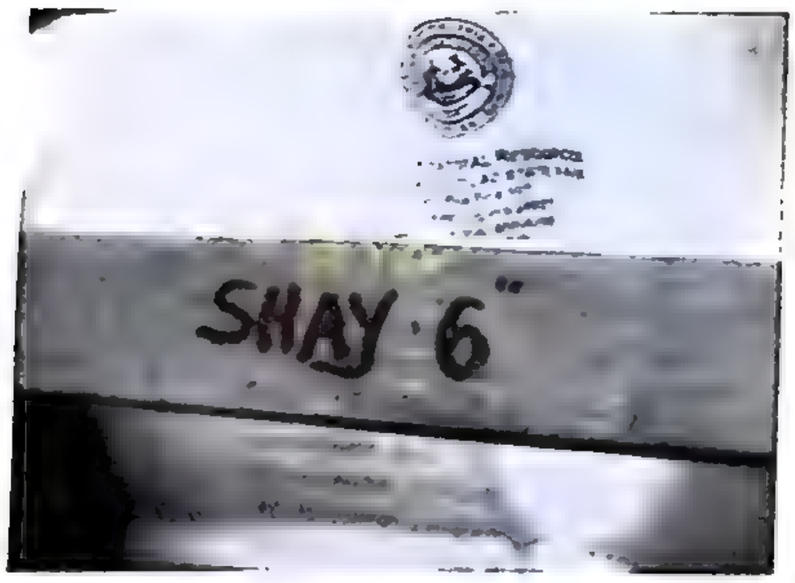
It took Lima a year to complete the engine, which bore builder's number 3354 and WM road number 6. Troublesome though she may have been for those who built her, Lima gave No. 6 the full photographic treatment on May 11, 1945. As was customary for builder's photos, the paint shop prepared No. 6's front end and right side with a flat, water-based gray finish that made for better photographs. The running boards and driver tires were even trimmed in white for the camera. After the photo session, the gray and white were washed off, leaving the engine in glossy black and ready for delivery.

DAVE DUDJAK

On May 10, 1981, during her first Cass railfan weekend, Big 6 hauls WM hoppers beside the Greenbrier River at Wanless, W.Va., on the Durbin line.

A day with Big 6

Clockwise from left: On October 17, 2004, Lima's last Shay passes an Appalachian vista as she pulls a Whittaker train upgrade between Cass's two switchbacks. At Whittaker, fireman Dirk Caloccia tends the ash pan through an opening in 6's girder frame. Cab lettering identifies No. 6 as a member of WM's SHAY class. Familiar Lima diamond builder's plate on the smokebox is accompanied by one from The Superheater Co. Bevel gears of shaft and right-front wheel mesh perfectly. Cass also has a Heisler No. 6, so the rack for the Lima's paperwork is fully labeled; WM 6 is about twice the size of Cass's other engines.



SIX PHOTOS: ROBERT S. MCGONIGAL

Western Maryland No. 6 left Lima without ceremony or notice in TRAINS or *Railway Age*. By Shay standards, she was a giant: 324,000 pounds total weight, 17x18-inch cylinders, 48-inch wheels, 62.375-inch boiler diameter, 65½ feet long, 59,700 pounds tractive force. But she was not quite the biggest Shay ever. She closely resembled Greenbrier, Cheat & Elk No. 12, built in 1921 to virtually the same specs but 16,000 pounds lighter; the addition of a fourth truck in 1937 (at Cass, where No. 6 now lives) gave No. 12 a higher total weight and tractive force. The largest Shay to leave Lima was Kansas City Southern 900, built in 1913 for tight K.C. trackage; just as heavy as No. 6, it topped the final Shay in cylinder size, boiler diameter, and tractive force. Nos. 12 and 900 both were scrapped.

No. 6's arrival at Chaffee allowed the retirement of Shay No. 4, and bumped No. 5 to secondary status. Few in-service photos of No. 6 exist, thanks partly to the remote location of the Chaffee Branch, and partly to her short career. After just a few years, the Vindex mine closed, throwing both Shays out of work. No. 6 was last used in October 1949, six months after being retubed. She and the 5 were stored at Chaffee for a time, then moved to Ridgely, W.Va., just west of Cumberland.

By 1953, it was clear that No. 6 was indeed the last Shay; her unique status, and the formation only 170 miles away of one of the first railway museums in the country, allowed her to escape the scrapper's torch. After decades of accumulating and occasionally displaying a range of historic locomotives

MICHAEL SHERMETTA

Big 6 holds the lower leg of the wye near Bald Knob as a train squeals around the sharp mainline curve on May 18, 1997, during a railfan weekend.

and cars, the Baltimore & Ohio had decided to establish a museum at its Mount Clare station and shops in Baltimore.

When the B&O Transportation Museum opened on July 2, 1953, WM was busy preparing its contribution: Shay No. 6. Pulled from the dead line and given a mechanical going-over and new livery that included WM's "fireball" herald, the eight-year-old was readied to take her place among B&O's antiques. With a couple of cabooses, she ran under her own steam from Hagerstown down the WM main line to Baltimore, arriving at the museum July 19, 1953. WM steam ended one year later.

FOR 27 YEARS No. 6 reposed at Mount Clare as a static exhibit in the nation's only major railroad-operated transportation museum. The museum's status as an arm of the railroad—by this time, the Chessie System—was key to the next phase of the famous Shay's life. In 1980, a series of events, some related to railroad preservation, had placed Chessie in a position of being receptive to proposals from interests in West Virginia. One proposal came from the Cass Scenic Railroad, a unit of the West Virginia state park system. Cass offered to trade two of its engines—Greenbrier, Cheat & Elk three-truck Shay No. 1, which had a bad boiler, and the last steam engine produced by the Porter Locomotive Works, a U.S. Government 0-4-0T built in 1950.

The museum agreed to the swap, and in August 1980, No. 6 was removed from the Mount Clare roundhouse. In a manner of speaking, she removed herself. To get out of the house, the 6 first had to move from her stall onto the turntable, which would then be rotated to line up with an outward-leading track. It was decided that the most expeditious way to get the Shay onto the turntable was to feed compressed air into her cylinders, open the throttle, and literally run her a few dozen feet. When this was done, two-and-a-half decades' worth of dust and dead insects erupted from the stack in a roar. After the 6 was outside, a diesel towed her in a special move from Baltimore to Cass via Cumberland, Chaffee, and Elkins. The initial agreement was for a 10-year lease of the engine to Cass, but it's recognized now that the 6 is at Cass to stay.

Artie Barkley, shop foreman at Cass, recalls that No. 6 needed very little work. He and his crew had her in steam for the May 1981 railfan weekend, an annual Cass event. Though No. 6 has been a generally reliable performer, her sheer size has limited her usefulness. For several years after she arrived, light rail kept her off the 11-mile run up to Bald Knob. Instead, she worked trains from Cass to Durbin on a former C&O line. When the Greenbrier River washed out portions of that line, Cass ended the Durbin trips and put its resources into its signature line up the mountain, relaying it in 1992-93 with 100-lb. rail and making other roadbed improvements. As a result, Cass's track—the envy of many a short line and even some Class 1's—is more than adequate for the 162 tons of Big 6. She even touches ex-WM track occasionally, on runs to Spruce.

There's still one place the "Monster Shay" can't go, though: a 40-degree curve up toward the top of the line. Fortunately, this garden railway-like bend forms one leg of a wye, so by heading, then backing, through the other two legs, No. 6 can attain Bald Knob. That's inconvenient, though, and rarely happens outside railfan weekends. For this reason, No. 6 usually works the short trips from Cass to Whittaker Station, about a third of the way up the hill. Though they run more often (two or three times a day, vs. once a day for the Bald Knob trips), the Whittaker trains are generally shorter (5 cars, vs. 8 or more), so the 6 hardly breaks a sweat. Indeed, compared to her older, smaller stablemates, No. 6 behaves in a rather un-Shay-like manner. She's tight, quiet, with power to spare.

"She's in a class by herself," says Gary Cassell, a 20-year Cass veteran and her regular engineer.

"I've never even dropped the bar on her," he continues, referring to the reverse-gear setting that would yield maximum power. "She just moseys along up the hill." ■

A new dress for opposed pistons

Fairbanks-Morse's C-Line tries to be "the ideal diesel"

By David P. Morgan

NORTON D. CLARK

Working on the Rock Island, C-Line demonstrators 4802 and 4801 roll into Englewood Union Station on Chicago's south side on April 25, 1950, with the RI-Southern Pacific *Golden State*.

EDITOR'S NOTE: This article is taken mostly from one that appeared on pages 16-17 of June 1950 TRAINS, with a few excerpts from a prior Morgan article on pages 40-41 of December 1948 TRAINS.

IF A CORPORATION may be said to practice a religion, then the sacred faith of Fairbanks, Morse & Company is its opposed-piston diesel engine. The devotion of Henry Ford and his offspring to the V-8 is comparable but of no greater dimension. That is why FM did not jump into railroading so much for the sake of building locomotives as for the chance of spreading the "OP" gospel in a dark continent.

FM just couldn't see why its submarine-tested OP shouldn't work quite as well for the railroads as it had for the U.S. Navy. The builder preached its first sermon in railroad motive power as early as 1939, when six Southern Railway streamlined motor trains under construction at the St. Louis Car Co. were equipped with 750 h.p., five-cylinder opposed-piston diesels. M-1 to M-4 (plus M-40 and M-41 on the Alabama Great Southern subsidiary of the Southern) are still in service, but poor engine balance threw cold water on FM's first attempt to evangelize the railroads.

As soon as its wartime production of OP's for the Navy permitted, however, FM erected a locomotive plant beside its Beloit (Wis.) factory and delivered Milwaukee Road No. 1802, a 1000 h.p. switcher, in August 1944. More switchers soon went to other roads—those in the midst of dieselization like the Monon, terminal companies like Louisville's Kentucky & Indiana Terminal, and heavy-duty transcontinentals like Union Pacific. All soon agreed that FM had made a good decision by entering the diesel locomotive business, and Beloit thereafter had its hands full keeping pace with orders for an enlarged line of shifters, transfer units, and road-switchers.

Beloit was so busy that FM farmed out the construction of its postwar 2000 h.p. road locomotives to the Erie (Pa.) works of General Electric. With a Raymond Loewy-styled nose and adaptability to either passenger or freight operation, the first three units were sent in early 1946 to the UP, where success was at first obscured. Later, an 8000 h.p., four-unit machine was sold to Kansas City Southern, where enthusiasm was immediate, and GE wound up constructing 111 cab and booster "Erie-built" units; the Pennsylvania Railroad alone bought 48.

Fairbanks-Morse freely admitted

CLASSIC TRAINS COLLECTION

On test: On January 4, 1950, demo 4801, in factory olive drab paint, pulled Milwaukee Road 26, the *Southwestern Limited*—nine cars behind two idling FM "Erie-builts"—from Savanna, Ill., to Milwaukee, and made up 20 minutes! The unit also demonstrated on NYC's Big Four ["Denting NYC's Last Steam Bastion," Spring 2001 CLASSIC TRAINS].

NORTON D. CLARK

Three days after leading the *Golden State* [opposite page], demos 4802-4801 were pausing at Englewood again, this time on a Pennsylvania Railroad train heading east. Note that they have been renumbered 2402-2401 for their PRR stint.

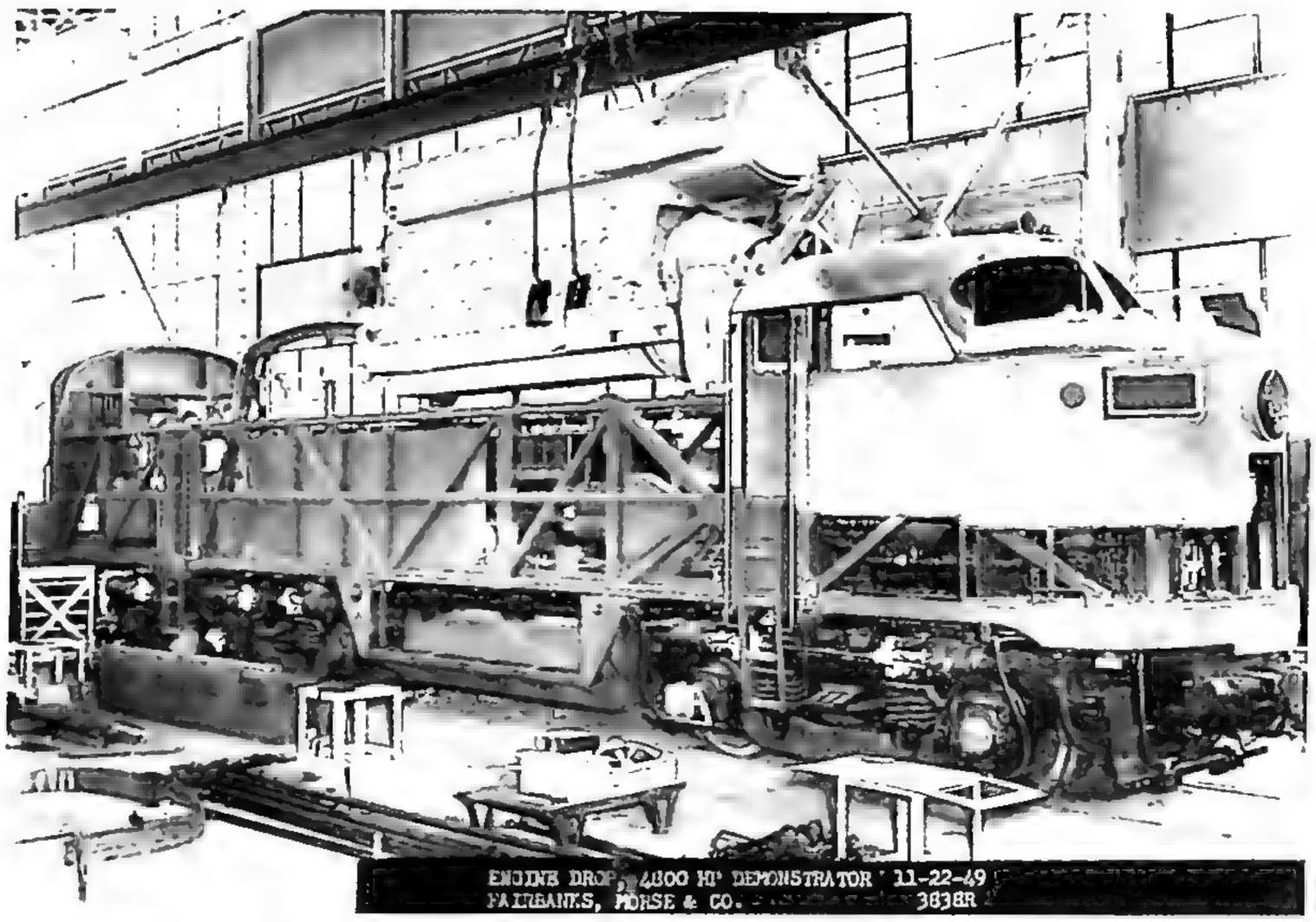
that this Loewy-styled, GE-built design was "conventional"—a stopgap program at best. FM's dream was an entirely new line of diesel locomotives designed "around the opposed-piston engine" and built at Beloit. So it leased a Chicago office with no name on the door, nor phone on the wall, near 2000 South Michigan Avenue, and installed therein one engineer named Henry W. Schmidt to do the job.

Now, Hank Schmidt is a graduate of Electro-Motive who served under the genius of Richard Dilworth, the man responsible for EMD's F3—which is to say he knows diesel locomotives like the late great Sam Vauclain of Baldwin knew steam engines. He has the stoop shoulders common to all men of his mission and a way of talking more basic diesel data in five minutes of casual conversation than most master mechanics could learn in a year.

Schmidt would never claim exclusive credit for the plan that came out of FM's leased Chicago office, but others on FM's engineering staff will tell you that the company got just what it asked for: a brilliant blueprint for a complete line of locomotives built expressly for OP diesel engines in 1600, 2000, and 2400 h.p. sizes. The one job for Schmidt's staff was to get on intimate terms with the kind of locomotive the railroads needed but didn't have—the ideal diesel.

The Electro-Motive F3 was advertised as "28 locomotives in 1," a terrific slogan and one far from being without meaning. But it lost its fascination in late September 1948 when Fairbanks-Morse summoned the press to a luncheon and announced it was ready to take the wraps off a revolutionary development in diesel locomotives.

Whether FM's newly announced



FAIRBANKS-MORSE

"Engine drop": The opposed-piston engine is lowered into one of the first two C-Liners at FM's Beloit, Wis., plant on November 22, 1949.

a debatable question—but "180 locomotives in 1" is an impressive slogan. FM's multiplication is very easily justified: the new line consists of one basic unit which can take three different engine sizes including 1600, 2000, and 2400 h.p. Thus, starting from the 1600 h.p. locomotive and working upwards by increments of 400 (by more powerful units or unit combinations), we reach the 9600 h.p. machine—and we have a total of 20 locomotives. FM multiplies that figure by the number of possible gear ratios, 9, and arrives at the published "180 locomotives in 1."

In other words, Fairbanks-Morse will build one unit 56 feet, 3 inches long and 15 feet high. Into that unit it can drop any of its three OP diesel engines. Dynamic braking may be added at will—the designers have provided installation room just to the rear of the cab where the equipment not only can be easily fitted at short notice but will always be readily accessible for maintenance work as well.

The train-heating boiler is equally flexible. If a railroad buys a 2000 h.p. C-Line locomotive for freight service, and traffic conditions later make a stepped-up gearing advisable, the road makes a simple change in the gear ratio and shortly the one-time freighter becomes a 100-miles-per-hour locomotive. The boiler becomes essential, but boilers are heavy affairs, so a six-wheel truck (with a center "idler" axle) is substituted for the original four-wheel truck. The forward truck is not changed. The boiler is lowered into the rear of the unit, bolted down, and the hose connections to water tanks connected, and the transformation is complete. While the 2000 and 2400 h.p. locomotives require the six-wheel rear truck when equipped with boilers, the 1600 h.p. unit does not need the change.

The C-Line on test

Little more than one year after that September 1948 press luncheon, an olive-drab, 2400 h.p. demonstrator, No. 4801, was ready at Beloit for its road tests. As customary with FM, it broke in on the old "Southwestern" between Beloit and Sturtevant, Wis.—where the builder had a contract with Milwaukee Road allowing field testing—by doing all the work on the Milwaukee section of the *Southwest Limited* while the regular road engine ran as a deadhead.

Next, 4801 had her first opportunity to really limber up on the eight-car *Chippewa-Hiawatha* out of Milwaukee to Chicago. Although CMStP&P rules prohibited speeds in excess of 90, the unit ran the 85 miles in 76 minutes with a flagstop at Deerfield. What amazed the engineer was the way 4801 climbed the grade to Lake in 10 minutes and was hitting 90 mph at the top; the best he had done previously on a *Hiawatha* with 4000 diesel horses and 12 cars was 13 minutes on the climb with a maximum of 80 at the summit.

On another run with a light six-car load, No. 4801 displayed rather interesting acceleration figures: on the slight incline north out of Deerfield, Ill., from a dead stand, the locomotive worked up to 20 mph in 20 seconds and 35 mph in 40 seconds.

Then in April, the new Consolidation Line cab went home to Beloit to receive a two-tone-green paint styling to match sister 4802. Coupled up as a 4800 h.p. locomotive, 4801-4802 came back to tackle the toughest, fastest first-class schedule on the Milwaukee Road: No. 57, the *Fast Mail*. With 28 cars of mail and express in tow, the FM ran the 85 miles from Chicago to Milwaukee in 80 minutes flat. That night No. 57 left Milwaukee 32 minutes late without the usual helper (to overcome friction of the notorious curves leading out of the station) and arrived in St. Paul only 9 minutes late.

As this TRAINS goes to press, Nos. 4801-4802 are scheduled to make a round trip and a half between Chicago and Harrisburg on the Pennsylvania (hauling the *Broadway*, among other trains) before moving east to the Long Island as pinch-hit power for eight overdue 2000 h.p. C-Liners which the LIRR has on order.

Meantime, New York Central, which ordered 2000 h.p. C-Line freight units before Fairbanks-Morse even had time to stage the locomotive's debut, has received the first of its 15 cabs and boosters and is working them on its hotshot *Pacemaker* freights.

These first few test and demonstration performances (plus the excellent behavior of C-Lines 5006-5007 and 5008-5009 on the NYC) cannot even begin to suggest what the availability and maintenance statistics for these new Fairbanks-Morse locomotives will be in the long run. On or off the record, FM engineers are not worrying; they will tell you without reservation that the C-Line is a hot rod, and no fooling.

They feel that No. 4801's Milwaukee Road trials barely began to demonstrate the high potential tied up in these basic statistics for the 2400 h.p. unit: 2000 h.p. dynamic braking capacity plus an 1800-gallon water supply and a 4500-pounds-per-hour Vapor steam generator in a locomotive weighing only 309,000 pounds. Of that, No. 4801 carries 252,000 pounds on drivers and develops a continuous tractive effort of 28,200 pounds at 100 mph, 26,400 pounds at mph.

A clue to 4801's ability is the fact that its throttle may be opened to the last notch when starting, without driver slip.

When the temporary job on the Long Island is over, Nos. 4801-4802 will be demonstrating their stuff across the nation and, FM hopes, bringing the bacon home in a great big way. ■

ED SPITZER; J. DAVID INGLES COLLECTION

A grimy A-B-A set of C-Liners, one-sixth of the Milwaukee Road's fleet of the 1600 h.p. B-B-trucked freight version, is in Bensenville (Ill.) Yard on February 12, 1966. The train is facing east; the bridge carries the Tri-State Tollway over the east end of the yard, just south of O'Hare Airport.

K.L. DOUGLAS; J. DAVID INGLES COLLECTION

Pennsy had 24 1600 h.p. C-Liners; that's a Trainphone antenna on the roof.

JOHN SCALA COLLECTION

Long Island took eight CPA-20-5's, the only ones; this is their original livery.

J.W. SWANBERG

New Haven CPA-24-5 793 is in fresh "McGinnis" colors on June 1, 1958.

J.W. SWANBERG

CN B-A1A passenger C-Liner 6703 rests at Toronto on January 28, 1967.

Why the C-Line fell on its face

Born as the road-switcher era took hold, FM's new cab units also were the victim of a Westinghouse decision

By Jerry A. Pinkepank

EDITOR'S NOTE: This article is an edited excerpt from the author's Fairbanks-Morse feature story, "Born at Beloit," which appeared on pages 36-49 of the "all-diesel" November 1964 TRAINS.

IN THE POSTWAR YEARS, the C-Line project was the major design undertaking of Fairbanks-Morse's new locomotive engineering staff. At the time, there was every reason to select a broad-range line of cab units instead of road-switchers, and this FM did. It was proposed to market cab and booster units with a common car-body design but to allow the customer to choose his horsepower—1600, 2000, or 2400. Freight or passenger units would be catalogued—the freight units being of conventional B-B configuration but the passenger units having a unique B-A1A wheel arrangement.

In the new C-Line design, the long Erie-built nose was bobbed, and new trucks were developed. The cooling system was conventionalized, bugs were squashed, and in December 1949 the C-Line demonstrator made its first road test.

Alas, it was an ill-starred birthday. Orders were already in for the first big road-switcher dieselizations—Delaware & Hudson with Alco for RS's and the Pere Marquette District of Chesapeake & Ohio with EMD for GP7's. Although influ-

M.L. POWELL; J. DAVID INGLES COLLECTION

New York Central shocked FM when it repowered with EMD 567's its 5000-series CFA-20-4's during 1955-57 (that's converted 5006 at Kankakee, Ill., left, with an F7 in March '56). The contemporary 6600-series CFA-16-4's, though, weren't repowered, and lasted longer. On June 3, 1964 (below), 6604 was at Greensburg, Ind., with two GP9's.

J. DAVID INGLES

ential FM customers Pennsylvania and New York Central were still buying cabs in a big way, the days of the "covered wagon" were numbered.

The year 1950 was a signal one for FM's opposed piston engine, for it saw the introduction of aluminum main bearings and adoption of the counterweighted crankshaft, which together brought bearing troubles to an end and cured in advance the small epidemic of crankshaft failures which would shortly strike FM engines equipped with older bearings. The aluminum bearing will certainly go down as one of FM's most significant contributions to diesel technology. Other engine builders were, and still are, shy of them, but experience has shown they hold up better in service than bearings of any other metal in general use. Extremely lightweight, these bearings lessen reciprocating mass and contribute to the OP engine's impressive power-to-weight ratio. The counterweight- ed shaft was not an FM development, of course, but its adoption was another contribution to bearing life.

Unfortunately, mechanical problems were still far from being conquered. The first C-Liners in service had various troubles, including piston life reportedly as low as 45,000 miles (about three months' service) on one road. There were other engine maintenance difficulties, and the 2400 h.p. Westinghouse generator experienced numerous failures. These troubles, even more than the rise of the road-switcher, probably contributed to the fact that in the short span of production from 1950 through 1952 only 99 C-Liners ultimately were sold in the U.S., despite the fact that the biggest orders for locomotives in railroad history were being placed in those years.

Canadian C-Line orders outlasted those in the U.S., the last ones being delivered in 1955. Beginning with the C-Liners, FM had licensed both the OP engine and its locomotive designs to the Canadian Locomotive Co. of Kingston, Ontario, which became a subsidiary. Kingston products, though, never got a strong foothold on either major Canadian railway. Canadian National bought 91 CLC's of seven models (including the Canada-only H12-46), and Canadian Pacific 69 units of six models.

In 1954 FM received a shock when former good customer NYC began putting EMD engines into almost-new 2000 and 2400 h.p. C-Liners–a reaction to the piston and other maintenance troubles. (This repowering enterprise was apparently not overly successful. The balance of NYC's rather large fleet of FM's–1600 h.p. C-Liners, 2000 h.p. and 1600 h.p. road-switchers, and 1000 h.p. and 1200 h.p. yard engines–remains in service with the original power plants, while some of the half-breeds have been retired.)

In 1953, Westinghouse Electric announced it would take no more new orders for heavy traction equipment and would begin phasing out its business in railroad motors and generators. It is reported that failure of the Westinghouse generator in 2400 h.p. C-Liners contributed heavily to this decision. The C-Liner was equipped with Westinghouse electrical apparatus, as were all of FM's contemporary road-switcher designs. If these Westinghouse-equipped locomotives were to continue in the catalog, new GE equipment would have to be designed and substituted. It was a small expense but not worth risking for units which had made a poor sales showing. Thus the born-too-soon 2000 h.p. road-switcher and the born-too-late C-Liners vanished from FM's sales proposals.

MIKE SCHAFER

One of Canadian Pacific's last six active C-Liners, CPA-16-4 4105, is assisted by two H16-44's and an F7B on a freight eastbound out of Grand Forks, B.C., for Nelson in September 1971.

Fairbanks-Morse's C-Line . . . Too Little, Too Late

MODEL	H.P.	TYPE	CYL.	YEARS BUILT	QUANTITIES	ROSTER
CFA-16-4	1600	B-B	8	1950-53	65 (29 in Canada)	MILW 23 A,C-28A-C; NYC 6600-6607; PRR 9448-9455, 9492-9499; CN 9300-9344 (even Nos.); CP 4076-4081
CFB-16-4	1600	B-B	8	1950-53	25 (7 in Canada)	MILW 23B-28B; NYC 6900-6903; PRR 9448B, 9450B 9452B, 9454B, 9492B, 9494B, 9496B, 9498B; CN 9301, 9303, 9305; CP 4455-4458
CFA-20-4	2000	B-B	10	1950-53	12	NYC 5006-5017
CFB-20-4	2000	B-B	10	1950-53	3	NYC 5102-5104
CPA-16-4	1600	B-B	8	1951-54	10 (all in Canada)	CP 4052-4057, 4064-4065, 4104-4105
CPB-16-4	1600	B-B	8	1952-54	8 (all in Canada)	CP 4449-4454, 4471-4472
CPA-16-5	1600	B-A1A	8	1954-55	6 (all in Canada)	CN 6700-6705
CPB-16-5	1600	B-A1A	8	1950-53	6 (all in Canada)	CN 6800-6805
CPA-20-5	2000	B-A1A	10	1950-53	8	LIRR 2001-2008
CPA-24-5	2400	B-A1A	12	1950-53	22	LIRR 2401-2404; NYC 4500-4507; NH 790-799 (790-791 are ex-FM demonstrators 4801-4802)

Source: *Second Diesel Spotter's Guide* (Kalmbach, 1973)

Canadian Pacific's great transcontinental domeliner was the dream train of the North

The Canadian

By Kevin J. Holland

APRIL 24, 1955, was a momentous day for rail passengers in Canada, as the country's two big railways each launched a major new transcontinental train: Canadian National the *Super Continental* and Canadian Pacific *The Canadian*. The trains competed head-to-head from the start, but of the two it was *The Canadian* that really revolutionized Canadian rail travel. CPR's new flagship marked the first use in

EASTBOUND AT MORANT'S CURVE, WEST OF BANFF, ALBERTA, SEPTEMBER 1972
MIKE SCHAFER PHOTO

1955: CANADIAN PACIFIC LAUNCHES THE CANADIAN

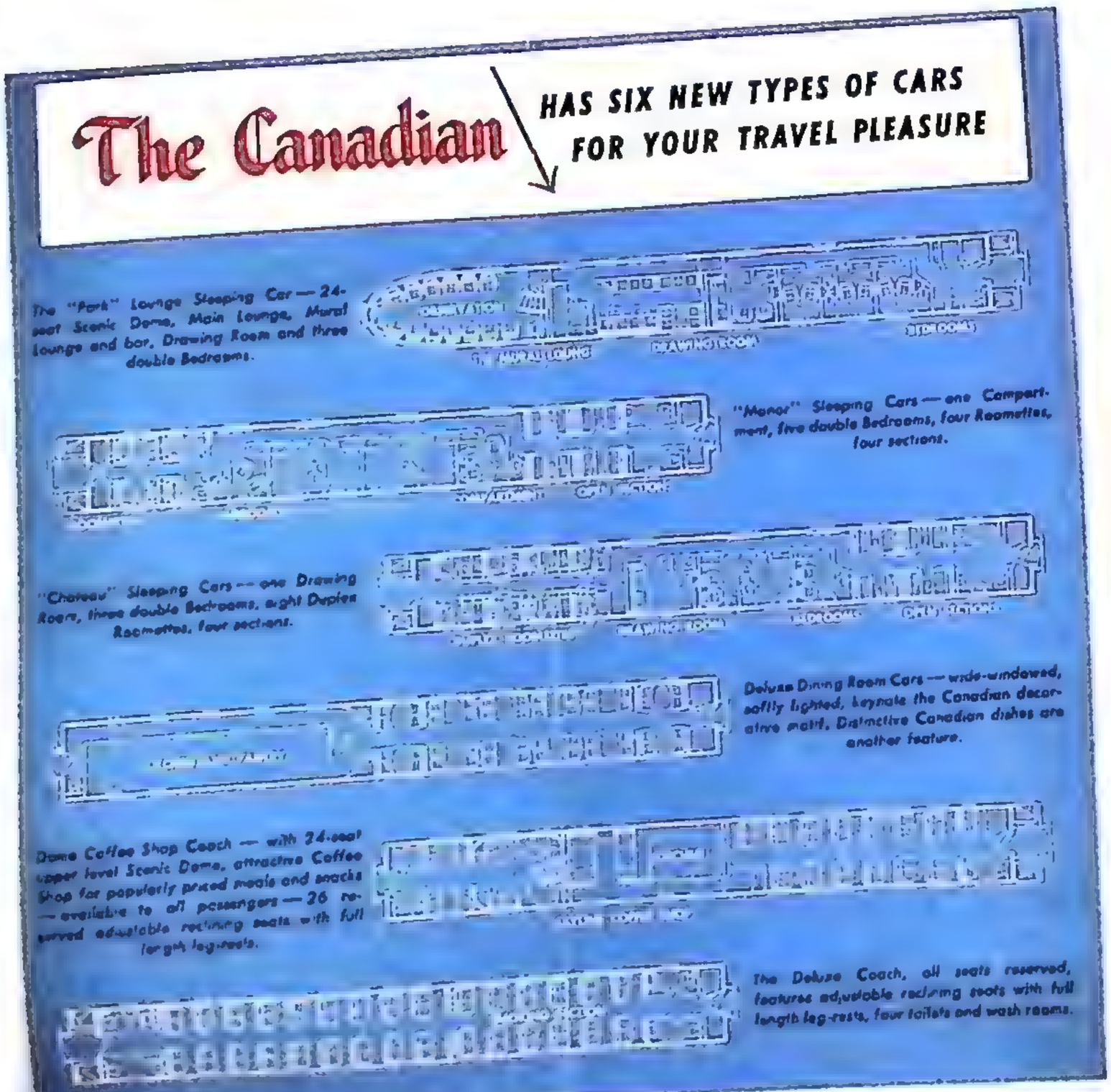
CANADIAN PACIFIC PHOTO; KEVIN J. HOLLAND COLLECTION

A publicity view shows the *Dominion* in the Rockies around 1952. Though comfortable and modern, CPR trains of this era were hardly dazzling.

revenue service on a Canadian railway of locomotive-hauled stainless-steel cars, domes, streamlined observation cars, and more.

Canadian Pacific was the first true transcontinental railway in North America, directly linking Atlantic and Pacific shipping at Montreal and Vancouver, and its history was tied closely to the development and promotion of Canadian tourism, particularly in the West. The company's global network of sea and air routes brought immigrants and tourists to Canada, and its railway delivered them to their final destinations.

The Canadian was the product of research undertaken by CPR after World War II as it sought to replace war-weary equipment and dominate what was expected to be a lucrative postwar travel and tourism market. CPR Vice-President (later president and chairman) Norris R. "Buck" Crump, the driving force behind creation of *The Canadian*, in 1949 joined other CPR managers in evaluating the merits of the dome car on a trip aboard the General Motors/Pullman-Standard *Train of Tomorrow*, on tour through Ontario and Quebec.


The Canadian
HAS SIX NEW TYPES OF CARS FOR YOUR TRAVEL PLEASURE
The "Park" Lounge Sleeping Car — 24-seat Scenic Dome, Main Lounge, Mural Lounge and bar, Drawing Room and three double Bedrooms.
"Manor" Sleeping Cars — one Compartment, five double Bedrooms, four Roomettes, four sections.
"Chateau" Sleeping Cars — one Drawing Room, three double Bedrooms, eight Duplex Roomettes, four sections.
Deluxe Dining Room Cars — wide-windowed, softly lighted, keynote the Canadian decorative motif. Distinctive Canadian dishes are another feature.
Dome Coffee Shop Coach — with 24-seat upper level Scenic Dome, attractive Coffee Shop for popularly priced meals and snacks — available to all passengers — 26 reserved adjustable reclining seats with full length leg-rests.
The Deluxe Coach, all seats reserved, features adjustable reclining seats with full length leg-rests, four toilets and wash rooms.

KEVIN J. HOLLAND COLLECTION

By 1950, CPR's transcontinental and shorter mainline passenger runs employed an assortment of heavyweight and pre- and postwar lightweight cars, pulled by Pacifics and semi-streamlined Hudsons, Selkirks (2-10-4), Jubilees (4-4-4). CPR's postwar smoothside lightweights, including 19 *Grove*-series 10-roomette, 5-double bedroom sleepers, were built by Canadian Car & Foundry and finished in CPR's own Angus Shops in Montreal. They retained the welded, gently curved sides favored by H. B. Bowen, CPR motive power and rolling stock chief until 1949. Their vaguely Anglicized styling dated to 1936 and evoked Milwaukee Road's *Hiawatha* rolling stock unveiled the previous year.

Bowen was a steam stalwart, but his retirement in 1949 opened the door for others in CPR management, notably Buck Crump, to embrace dieselization. After experience with three EMD E8A's purchased in 1949 for Montreal-Boston service in conjunction with Boston & Maine (the only E units bought new by a Canadian railway), CPR instead adopted the General Motors FP series as its preferred diesel passenger power. CPR's first group of FP7's, 4028-4037, was built by GMD at London, Ontario, in September 1950, but they did not receive steam generators until 1952.

DAVE SHAW COLLECTION

TWO PHOTOS: CANADIAN PACIFIC

CPR's Buck Crump was inspired by the *Train of Tomorrow*. Forward-facing views inside *Canadian* dome observation car *Banff Park* show the Mural Lounge (above right) and the observation lounge.

In their traditional maroon livery, CPR's early 1950's passenger trains were comfortable and quite modern, but paled against U.S. offerings such as the 1949 *California Zephyr* and 1950 *Sunset Limited*. Crump, and others, took note.

In mid-1953, rumors of change became fact when Canadian Pacific announced a $38-million, 155-car order with the Budd Company. This was sufficient to equip a new, accelerated cross-country schedule (which required seven trainsets), and allow a partial re-equipping of the secondary transcontinental *Dominion*, the Montreal-Saint John (New Brunswick) *Atlantic Limited*, and other runs. The original Budd order called for 30 60-seat coaches, 18 48-seat dining cars, 18 coffee-shop dome coaches, 18 sleeper-observation-dome-lounge cars, and 71 sleeping cars (29 with 8 duplex roomettes, 4 sections, 3 double bedrooms, and 1 drawing room, the *Chateau* series; and 42 with 4 roomettes, 4 sections, 5 double bedrooms, and 1 compartment, the *Manor* series).

A revision added 18 baggage-dormitory cars for passenger luggage and crew relief, bringing the total order to 173 cars for $40 million, with deliveries planned to begin in mid-1954. At the time, this was the largest single order for passenger cars ever placed by Canadian Pacific or received by Budd.

Although Budd built the cars at its Red Lion plant outside Philadelphia, $7 million worth of components, ranging from couplers and truck castings to light fixtures, furnishings, and carpeting, were produced in Canada and forwarded to Budd. This high proportion of Canadian-made parts was rooted in both patriotism and pragmatism. Not only did this deflate criticism of the cars' being built in the U.S. (Crump and CPR, sold on the merits of Budd's stainless-steel construction, had rejected the alternatives), it also subjected the cars to lower Customs duties when they were delivered to Canada.

A rolling art gallery

In typical fashion, Budd contracted work on *The Canadian*'s interior decor to Harbeson, Hough, Livingston & Larson, a Philadelphia architectural firm. In June 1953, partner John Harbeson, a protégé of designer and prewar Budd styling genius Paul Cret, outlined the firm's concept of a "flow-through" series of interior color schemes to Ernest Scroggie, head of the CPR design department team responsible for the train.

Mirroring emergent 1950's color and design trends, three schemes were used in the *Manor* sleepers and pairs of different schemes in each of *The Canadian*'s other car series, largely based on pastel shades of blue, pink, green, gray, and brown. Harbeson's theory was to draw colors from Canada's flags and natural landscape. Graphic elements inspired by flora, fauna, and historical

sites along the train's route completed the decor, and the result was effective.

The inclusion of 4x20-foot painted murals in the *Park* observation cars' beneath-the-dome lounge was proposed by Harbeson in February 1954 (and reprised with Burlington's *Denver Zephyr* of 1956). After deciding to name the observation cars to honor national and provincial parks, CPR enlisted Robert W. Pilot, then president of the Royal Canadian Academy of Arts, to approach some of the nation's leading artists regarding creation of the 18 murals and related map paintings. The resulting collection, some by members of Canada's renowned Group of Seven, survived the rigors of smoke, vibration, and wear to become a national treasure. Each presented a scene from the park for which the car was named, with the main mural on the forward bulkhead wrapping into a side panel worked around three windows of the exterior wall. A 3x5-foot painted map of the appropriate park occupied the wall in the rear lounge above the writing desk.

Interior decoration of the coaches was typical of the rest of the train, with extensive use of plastic laminates and carved linoleum panels featuring industrial and recreational scenes. Sleeping-car rooms contained framed art prints.

The *Skyline* coffee shop dome coaches featured a 4x9-foot carved linoleum mural map of Canada on the rear bulkhead of the coach section, a device adapted from the *California Zephyr* and intended to help passengers trace their journeys. The buffet section of these cars contained more carved linoleum panels featuring icons of Canadian (and CPR) transport history, national and provincial coats of arms, and legislative buildings.

In the "Dining Room cars" (the vernacular "diner" deemed inadequate in CPR's eyes), bulkheads were decorated with carved linoleum crests of the Canadian Pacific hotel containing the public room for which the car was named. Small banquette (booth) sections were separated from the main dining room by glass partitions etched with images of Magpies, Kingfishers, and other Canadian birds. Etched mirrors featured images of provincial flowers. A notable feature was the "Starlight" ceiling—derived from a similar treatment aboard the *Train of Tomorrow*—handpainted to resemble a night sky on either a blue or pink background.

Spreading the word

On June 29, 1954, CPR Vice-President Crump led a company delegation to the Budd plant to formally accept the first completed car, duplex sleeper *Chateau Bienville*. Crump then returned to Red Lion on July 21 to accept delivery of the first completed "signature car," dome observation sleeper *Banff Park*.

These first two cars were sent on a 10,000-mile cross-Canada publicity tour

BROCHURE, KEVIN J. HOLLAND COLLECTION; PHOTO, CANADIAN PACIFIC

during July and August 1954, and they hosted more than 200,000 visitors at 34 display venues. As the rest of the cars arrived in Canada, they made shakedown revenue runs on various trains (often behind steam power), giving travelers and the competition a glimpse of things to come. By the time the Dining Room cars and coaches began to arrive in early 1955, preparations were well along for the new train's launch.

CPR did very little advertising in 1954, anticipating what in essence was a double budget in 1955 to support *The Canadian*'s inaugural year. The railway scored a public relations coup with an April 15, 1955, press trip on the Reading Company between Philadelphia and New Hope, Pa., launching a campaign with *Vogue* magazine and several women's fashion retailers promoting a trip on the new train. Some of the cars had already been delivered to CPR, and were returned to Budd for this trip; virtually the entire April 15 issue of *Vogue* was devoted to the new train.

Heavy newspaper and magazine advertising and editorial coverage in North America and abroad preceded the maiden runs, and festivities were held along the train's route. Without hyperbole, CPR hailed the train as "The first and only all-stainless steel 'dome' stream-liner across Canada" and "The world's longest, most spectacular Scenic Dome ride." Interestingly, the railway avoided reference to Vista-Domes, the sobriquet applied by concept pioneer

Hungry passengers on *The Canadian* could choose between the Skyline Coffee Shop and the fancier, full-service Dining Room car.

KEVIN J. HOLLAND COLLECTION

Sleeper *Chateau Bienville* and obs *Banff Park*, first cars off the Budd line, are on display at the Canadian National Exhibition in Toronto during their 10,000-mile tour in July-August 1954.

Burlington—on CPR they were "Scenic Domes." Underscoring the different passenger philosophies of CPR and Canadian National, it was almost a decade before CNR offered domes, acquiring six ex-Milwaukee Super Domes in 1964-65 and leasing three B&O sleepers in 1966-67 [see sidebar, page 67].

Names and numbers

The new train's name originally was to have been *The Royal Canadian*, and it was referred to as such in internal documents until early 1955. Political considerations led to aspirations for a "Royal" prefix being dropped shortly before the service was inaugurated—but not before CPR's 1955 calendar had been printed with the rejected name, a dilemma fixed with strategically placed stickers. CPR had used the name *Canadian* before on a Chicago-Montreal schedule, but made the distinction of referring to its new train as *The Canadian*.

Befitting its flagship status, Canadian Pacific assigned the new train's daily Montreal-Vancouver section numbers 1 westbound and 2 eastbound (the former flagship *Dominion* was 7 and 8). The new daily, connecting Toronto-Sudbury (Ont.) trains became 11 westbound and 12 eastbound. The Montreal and Toronto sections combined or separated at Sudbury.

The new westbound schedule cut 16 hours off the *Dominion*'s 87 hours, 10 minutes. Most of the savings came from quicker acceleration of the lighter cars; disc brakes; mechanical air-conditioning that eliminated icing stops; minimal head-end traffic; and reduced station dwell times. The new domeliner also managed to serve most major on-line population centers at convenient times and traversed the scenic Banff-Lake Louise-Spiral Tunnel area of the Canadian Rockies in daylight both ways . . . no small feat for a 2881-mile run!

Eastbound, *The Canadian* passed through some outstanding scenery even after the western mountains were left behind. Following a 24-hour passage across the prairies, passengers were treated to a spectacular cliff-hugging trip along Lake Superior's north shore before arriving in Sudbury, a northern Ontario nickel mining center, where the train was split. Except for the Sudbury activity, *The Canadian* was not normally switched en route, nor were through cars offered beyond endpoints. The slower *Dominion* handled any connecting and set-out cars over the same route, and provided service to stations where *The Canadian* did not stop.

Carrying the new train's appearance inside its major terminals, the portable check-in booths used for *The Canadian* at Montreal, Toronto, and Vancouver were crafted of stainless steel, complete with Budd fluting and maroon accents.

New diesels

The railway chose General Motors F units to pull *The Canadian*. The initial power pool included eight A-B-A sets (one for each trainset, plus a spare). Existing dual-service FP7's 1400-1404 (formerly 4099-4103, regeared for 89 mph) were supplemented with the arrival of the road's final cab units, FP9's 1405-1415 and F9B's 1900-1907. As CPR's early policy of assigning units to specific trains was relaxed, FP7's in series 1416-1434 also regularly led the train, assisted by F7B's 1908-1919. More exotic power over the years included Montreal Locomotive Works FPA2's (4082-4083 and 4094-4098), boiler-equipped RS10's (8462-8482 and 8557-8581), and GM GP9R's (8501-8529). Steam is known to have led *The Canadian* on a handful of trips in northern Ontario, as late as 1959, when the normally assigned diesels balked. On infrequent occasions in later years, an SD40 or other freight unit piloted the train.

Before CPR's 1968 image change, locomotives wore the maroon-and-gray scheme, with a beaver herald on cab unit and boiler-equipped hood unit noses. The railway's name was spelled out in gold block letters until 1964, when script lettering style began appearing. After 1968, "Action Red" with white nose stripes, black-and-white rear stripes, and the new "multimark" logo, was the rule.

At times during the train's CPR career, the assigned FP7's and FP9's were equipped with a roof-mounted Pyle dual Gyralite, aimed skyward at a 45-degree forward angle to enhance grade crossing safety, one of the few applications of such warning lights in Canada.

In March 1955, F's 1412 and 1425 were the first to receive strap-iron rooftop "antlers," built to duplicate the cross section of the Budd domes and knock away fouling ice formations ahead of the domes' passage through

CANADIAN PACIFIC PHOTO; KEVIN J. HOLLAND COLLECTION

In eastern British Columbia amid the majestic Rocky Mountains, *The Canadian* is seen eastbound on Stoney Creek Bridge in 1955 (left), and westbound near the Spiral Tunnels on the west side of the Continental Divide in August 1966.

tunnels. These were applied only to GM cab units, and remained a fixture on many until VIA Rail Canada assumed operation of CPR's remaining passenger services, including *The Canadian*, in October 1978.

Behind the locomotives

The Budd Company provided seven series of cars for *The Canadian*, with the railway itself providing an eighth in the form of rebuilt heavyweight tourist sleepers. Externally, the Budd-built cars featured the last new styling treatment for fully-fluted, pre-Pioneer III/Metroliner Budd equipment—the trademark fluted roof was maintained, as were the traditional wide fluting strips below the windows. Unlike most earlier Budd construction however, the narrow fluting was eliminated from both the letterboard and the underbody end skirting. This smooth letterboard was also seen on the 1950 Southern Pacific *Sunset Limited*, the 1952 Pennsylvania Railroad *Congressional* and *Senator*, and several groups of cars used by Southern, Chicago & Eastern Illinois, West Point Route, and Louisville & Nashville. A variation also was found on cars built for Chesapeake & Ohio's 1948 *Chessie*.

The Canadian's Budd-built cars rode on 8-foot, 6-inch wheelbase CanCar (Canadian Car & Foundry) 41-NDO trucks with 36-inch wheels. Trucks beneath baggage-dorms, and *Manor* and *Chateau* sleepers, had SKF roller bearings; the other cars used Timken bearings. Trucks were equipped with Budd's Rolokron electric wheelslide control system, not unlike the anti-lock braking systems found on most present-day automobiles. The heavyweight tourist sleepers rebuilt by CPR retained their straight-equalized six-wheel trucks, which also had roller bearings.

The Canadian's as-delivered exterior paint scheme featured a maroon letterboard running the full length of each car and wrapping around the rear end of the *Park* cars. Below the windows a narrower maroon stripe ran the full length of the belt rail moulding and across vestibule and diner doors. To avoid friction damage, striping was not applied to the sliding baggage doors. The railway's name on the letterboard

JIM SHAUGHNESSY

was imitation gold, and each car's name (or number) appeared below the windows in maroon on a stainless-steel panel. Mounted on the pier panel near each corner of every car (vestibule end only of the *Park* cars) were 18-inch-high cast metal CPR beaver crests. These lasted until the 1968 CP Rail image overhaul that also saw the two maroon stripes replaced by Action Red letterboard striping and car names.

The Canadian's original consist from Vancouver was 1 baggage-dorm; 3 U-series tourist sleepers; 1 Skyline dome; 1 60-seat coach; 1 Dining Room car; 4 *Manor* sleepers; 2 *Chateau* sleepers; and a *Park* car. Extra coaches and sleepers were added in peak summer periods, and "showroom" consists (with just one of each car type) were common during the winter, especially in later years.

As conceived, *The Canadian* was not to perform head-end work en route, ex-

A map on a CPR brochure shows that the two sections of *The Canadian*, for Montreal/Ottawa and Toronto, were combined at Sudbury, Ont.

KEVIN J. HOLLAND COLLECTION

STAN F. STYLES PHOTO; KEVIN J. HOLLAND COLLECTION

JIM SHAUGHNESSY

J. DAVID INGLES

Terminals west and east: *Park* cars of the *Dominion* (left in photo above) and *Canadian* stand side-by-side at Vancouver, B.C., in August 1962. At Montreal's Windsor Station, site of CPR headquarters (above right), FP7 1421 and an F7B are on the point of No. 1 in August '56. Eight years later (right), another FP7-F7B set picks its way out of Toronto with a 13-car No. 11 for Sudbury.

cept for passenger baggage. A full baggage car would have been under-utilized, so to accommodate this traffic efficiently, 18 85-foot baggage-dorms were built as series 3000-3017. They combined a 47-foot, 6-inch forward baggage section, with a dormitory housing a steward's room and three-tier bunks for dining and buffet car crew. Full toilet and lavatory facilities, including a crew shower, were also provided. In later years, as the train handled more and more express and general head-end traffic, the baggage-dorms were supplemented by express boxcars and curved-side, 4700-series baggage-express cars. Many of these baggage cars, along with 10 40-foot express boxcars in storage-mail service, were repainted silver to blend with the Budd equipment. The baggage-dorms were renumbered into the 600 series in September 1973.

Adding a deception

After the Budd order was finalized, CPR decided to provide tourist-class sleeping space on the new train. No additional funds were available for new cars, so in early 1955, 22 heavyweight 14-section sleepers were rebuilt in the railway's Angus Shops. The cars had entered service in the late 1920's as "P" and "G" series 12-section, 1-drawing room sleepers. They had been reconfigured as 14-section tourist sleepers (with no-frills berths and cooking space) in the early 1950's, and emerged from their 1955 rebuilding with carbodies cosmetically altered to blend with the Budd rolling stock.

The raised clerestory remained, unfluted, while the lower roof areas on either side were raised and sheathed in Budd's narrow roof fluting. The riveted letterboard and window panels were left intact, and standard Budd fluting was mounted over the girder sheets. The ends, vestibule doors, six-wheel trucks, and most underbody appliances were not altered appreciably. In the *Canadian* paint scheme with their non-fluted areas painted silver, the deception was surprising successful, although the raised clerestory was a quick giveaway from the proper angle.

Interiors were upgraded to match the new Budd stock as closely as possible in materials and color schemes. According to the late Omer Lavallée, Canadian Pacific's historian and archivist who advised the CPR management team charged with naming *The Canadian*'s cars, early consideration was given to naming these cars for mountain passes or rivers. The final utilitarian names were a curious departure from the train's other strongly themed series.

As many as three of these cars were assigned to each run, depending on the season, positioned behind the baggage-dorm. Declining traffic and advanced age, however, gave the "U"-series cars a mere 10 years in revenue service. Their use was curtailed in 1965, and the February 1966 discontinuance of the *Dominion* freed up newer Budd equipment. All "U" series cars were scrapped by the end of 1968.

While some U.S. railroads (notably Santa Fe and Katy/Frisco) outshopped heavyweight cars in a simulated stainless-steel "shadowline" paint scheme, and others like Wabash and Burlington rebuilt heavyweight business cars with stainless-steel fluting, these CPR tourist sleepers were the only group of cars to be given such an extensive cosmetic overhaul for revenue service.

The Canadian's 30 coaches brought the long-distance "Sleepy Hollow" seat to Canada, and had interiors divided into 24-seat smoking and 36-seat non-smoking sections, separated by etched

Green (and black and gold) with envy

CNR's *Super Continental* lacked the panache of *The Canadian*

CANADIAN NATIONAL, although desperate to re-equip its passenger trains after the rigors of World War II, purchased only 75 passenger-carrying cars (55 "Deluxe" coaches and 20 I-series 24-duplex roomette sleepers) from commercial builders between 1946 and 1950. By contrast, CNR bought 263 new head-end cars between 1946 and 1953 to re-equip its mail and express fleet.

The postwar material shortages that rendered most new-car orders problematic helped persuade CNR to rebuild and modernize scores of passenger cars in its own shops. This was embraced as a stop-gap until carbuilders were, in the words of CNR President Donald Gordon, able to "undertake the production of passenger cars for us in the volume required."

Gordon and his predecessor R. C. Vaughan were thus able to keep CNR carshops humming at near capacity by turning 170 war-weary, heavyweight "sow's ears" into "silk purses" that, on the inside at least, offered postwar passengers improved accommodations and amenities. Sealed windows and "balloon" roofs gave these rebuilt cars a decidedly modern appearance, and roller-bearing trucks helped lessen the locomotives' burden. Shops across the CNR system contributed to the program, which culminated with the modernization of an additional 41 heavyweights in 1953-54, even as lightweight equipment had begun to arrive.

In 1952, CNR finally made the new-car plunge, and industry headlines, by requesting bids on 194 new, lightweight passenger cars. More headlines followed in 1953 with the placement of firm orders for 218 coaches from CC&F in Montreal, and 92 sleepers, 12 buffet-sleepers, 20 dining cars, and 17 parlors and buffet-parlors from Pullman-Standard's Chicago plant. This 359-car aggregate order was the largest of its kind, in dollar value, placed up to that time by one railroad.

Deliveries of the new cars were essentially complete by fall 1954, but CNR waited until April 24, 1955, to make its "big splash"—the inauguration, employing new CC&F and P-S lightweight cars along with many of the modernized heavyweights, of its cross-Canada *Super Continental*, head-to-head with CPR's *Canadian*.

KEVIN J. HOLLAND COLLECTION

Although they were launched on the same day, Canadian National's answer to *The Canadian* was far more restrained than CPR's dream train.

As its name implied, the *Super Continental* was an improved incarnation of CNR's former fleet-leader, the *Continental Limited*. As CPR would do with its *Dominion*, CNR's demoted *Continental* assumed the status of a maid-of-most-work running mate to the new train. Contrasting with *The Canadian*'s maroon-trimmed stainless steel, CNR in early 1954 had introduced an update to its formerly solid-green passenger-car livery. The *Super Continental*'s cars, like the rest of CNR's repainted fleet, had black-and-green bodies trimmed in yellow and accented with the circular CNR maple-leaf monogram introduced in December 1953.

In step with CPR, Canadian National created the *Super Continental* as a diesel-powered operation, initially employing GMD FP9 and F9B units in the West, and MLW FPA-2/FPB-2, FPA-4/FPB-4, and CLC CPA/CPB16-5 C-Line units in the East. Behind their motive power, though, similarities between the railways' new trains were few.

Cost, availability, and political considerations (CNR, being a ward of Canada's federal government at the time, was obliged to "spread the wealth" around the country) all factored into the mongrelized character of the new *Super Continental*. Far from the gleaming, homogeneous streamliner being crafted by Budd for CPR, Canadian National's rival train would emerge as an eclectic blend of U.S. and Canadian streamlined stock with modernized heavyweight cars.

As attractive as it was, CNR's new livery could not hide the riveted sides and bulging rooflines of many of the *Super Continental*'s modernized heavyweights. Interiors were blended more smoothly, but even the brand-new cars still lacked the panache of *The Canadian*. Beyond a lounge or two, food-service innovations like dinettes, and modernized heavyweights with small solarium end-windows, feature cars were beyond the mandate of the *Super Continental*. Domes would not grace the CNR train until a decade after its debut, when secondhand Milwaukee Road Super Domes entered service between Vancouver and Winnipeg.

By that time, ironically, Canadian National was aggressively pursuing rail passengers with innovative and exotic (if secondhand) equipment and aggressive marketing, while Canadian Pacific—despite the thorough modernity of its *Canadian*—had all but thrown in the passenger-train towel.—*Kevin J. Holland*

A view from FP7 1423 on No. 11 north of Ypres, Ont., in May 1962, shows an icicle-breaking "antler" on the trailing unit as well as the clerestory roofs of "U"-series heavyweights. Cars are: baggage-dorm, two "U"-series sleepers, coffee shop-dome-coach, coach, two *Manor* sleepers, *Chateau* sleeper, diner, and *Park* sleeper-dome-observation.

glass panels. The coaches were designed for long-haul travel, with large washrooms paired at the vestibule end (women) and the blind end (men). As in the rest of the train, all lighting in passenger sections was fluorescent. Six-foot-wide windows provided views of the scenery excelled only in the domes, but such a large expanse of glass necessitated the inclusion of a heated "air curtain," a layer of air flowing across the inside of the innermost pane to keep passengers warm in winter.

In later years, smooth-side 68-seat coaches from CPR's 2200-series frequently served on *The Canadian*, painted solid maroon or, later, silver with maroon or Action Red stripes, but they lacked the Budd equipment's cast-metal beaver shields.

Cars for eating, sleeping

The primary food service was handled in the 18 Dining Room cars, named for public rooms and lounges in Canadian Pacific hotels. The forward half of each car housed the kitchen, with the dining area made up of four booth-like 4-seat banquettes at the extreme ends of the main room, plus eight 4-seat tables. Banquette windows were 13 inches narrower than those in the main room, but all were equipped with integral venetian blinds. In common with all named cars in the Budd order, the Dining Room cars bore a small stainless-steel plaque on a corridor wall explaining the significance of the car's name.

Menus were famous for regional specialties like Ontario lamb, Lake Superior whitefish, Saskatchewan turkey, and British Columbia salmon.

Offering a more affordable meal alternative were 18 Skyline coffee-shop dome coaches, typically one per train between the tourist sleepers and coaches. Seating 26 in a coach section ahead of the dome, these cars offered light meals and snacks prepared in a small galley beneath the forward part of the dome. Food was served in the 17-seat main buffet area behind the dome. In addition, a semi-private area with booth seats for six people was in the under-dome space not occupied by the galley.

The standard Budd 24-seat dome was entered from the rear by a short curved staircase from the main buffet. A conductor's work station was at the front of the car, ahead of the coach accommodations. During the peak summer season, some Skyline cars had their coach seats temporarily removed in favor of an expanded buffet area. On rare occasions, *The Canadian* ran with two Skyline cars. If there was a flaw with the train's overall design, it was in creating a train with only two assigned domes, and then placing one of them in a food-service car rather than in a more flexibly assigned coach.

The 29 *Chateau*-series sleeping cars were named for Canadian historical figures of French heritage, and featured a unique floor plan of 8 duplex roomettes, 4 sections, 3 double bedrooms, and 1 drawing room. Their staggered roomette windows made them easy to spot. The 6-foot-wide drawing room window (also found on the *Park* cars) was unusually large for a sleeping car.

The 42 *Manor*-series sleeping cars, named for Canadian historical figures of British heritage, contained 4 S-type roomettes with cutaway beds and corner washstands; 4 sections; 5 double bedrooms; and 1 compartment.

Both of these series featured in-room speakers for the train's three-channel public address system (two for music, one for announcements). All rooms had with comfortable collapsible armchairs, and the drawing rooms also offered a 6-foot sofa (folding into a transverse bed by night). In keeping with postwar practice, toilet facilities in all sleeper rooms were fully enclosed.

As the highlight of *The Canadian*'s celebration of Canada's natural and cultural history, the signature *Park* cars were named after 18 of the country's best-known national and provincial

More on our website

A complete roster of the CPR's *Canadian* cars is at our website, www.classictrainsmag.com

JAMES A. BROWN

parks, most of which were located on, or near, the CPR main line. This was prudent marketing, yet also demonstrative of CPR's pivotal role in the 19th and early 20th century development of some of Canada's prime tourist destinations.

Conspicuous but understandable in its absence as a name choice was *Jasper Park*. Canadian National's *Super Continental* traversed Jasper National Park, and CPR wasn't about to promote one of the competition's major destinations. Three other names were assigned, only to be rejected before the cars were completed: *Battleford Park* (it became Prince Albert Park); *Garibaldi Park* (*Kokanee Park*) and *Nipigon Park* (*Sibley Park*).

While *The Canadian*'s observation-car names were always intended to have honored Canada's parks, original CPR plans called for the use of the word "View" in place of the "Park" nomenclature ultimately adopted (*Algonquin Park* thus would have been *Algonquin View*, and so on). The idea didn't die, however, for when four New York Central Budd-built *Brook*-series sleeper-observation cars were purchased by CPR in 1958, they became CPR's *View* series and saw a decade of service on regional trains in Ontario and the Maritime provinces.

The *Park* cars almost qualify as an "off-the-shelf" design, as their floor plan is virtually identical to the seven *California Zephyr* dome-lounge-sleeper-observation cars built in 1948 and 1952, with a drawing room in place of the *CZ*'s master room. Three double bedrooms and the drawing room were ahead of the 24-seat dome in the *Park* cars, and 13 inward-facing armchairs and a writing desk/magazine rack occupied the observation lounge. The compact Mural Lounge provided seating for 12 under the dome, separated from the aisle by a sidelit etched glass partition—again, almost identical to the *CZ* cars' under-dome arrangement. The biggest external differences from the *CZ* cars (aside from the *Park* cars' smooth letterboard and lack of skirting) were the absence of a Mars light and the use of small teardrop markers in place of the *CZ*'s "lunchboxes," an apt term coined by TRAINS' late Editor, David P. Morgan. (Small red rooftop warning lights were installed in the early 1980's by VIA.)

An illuminated rectangular tailsign was hung on the rear door. Different designs were used for *The Canadian* and *Dominion*, and a CP Rail version appeared in 1968, incorporating the new "multimark" symbol created by design consultants Lippincott & Margulies.

The gleam fades

Declining patronage hit both CPR and CNR passenger trains after the late 1950's, but the two railways took divergent approaches to keep passengers in the face of air and highway competition. Canadian National's aggressive passenger policy of the mid-1960's contrasted with CPR's more defeatist attitude of seeking service curtailments and discontinuances at every opportunity. *The Canadian*'s cross-country running mate, the *Dominion*, was discontinued in February 1966, although the second transcontinental schedule was revived as the *Expo Limited* in summer and fall 1967 to handle crowds traveling to Montreal's Expo67 World's Fair and elsewhere during Canada's Centennial Year.

Once that traffic bubble had burst, CP Rail, as the company was known after '68, set its sights on complete discontinuance of its long-distance passenger services. Canada's federal government, rejecting proposals beginning in 1970 by CPR to discontinue or at least curtail the frequency of *The Canadian*, instead implemented an 80 percent subsidy of the train's losses, laying the groundwork for the creation of VIA Rail Canada and that agency's eventual assumption of the remaining CP Rail passenger services on October 29, 1978.

As the CPR fleet marks its 50th birthday, the Budd equipment built for *The Canadian* has fared surprisingly well. An early casualty was *Fundy Park*, destroyed in a Saskatchewan wreck in 1959; two baggage-dorms were wrecked in northern Ontario in 1965. Of the original 173 cars, 169 were sold to VIA in October 1978. Refurbished inside, and with a blue stripe replacing CP Rail's red letterboard, these cars became the backbone of VIA's conventional fleet as hundreds of non-stainless-steel ex-CNR cars were retired. Although the cars no longer traveled their former CPR route after January 1990, most were rebuilt beginning in the late 1980's, complete with head-end-power and an entirely new collection of original murals and art unveiled in October 1990.

It's hard to believe, but travelers are still able to enjoy some of the finest equipment ever built by the Budd Company. Even as VIA Rail replaces some of its ex-CPR Budd equipment with European stock on the Montreal-Halifax *Ocean*, stainless-steel cars built for *The Canadian*, maintained in top-notch condition, continue to link Toronto and Vancouver in revenue service. ■

By summer 1971, CP Rail had mostly lost interest in *The Canadian*, but *Tweedsmuir Park* still looked like a treasure after a rain at Field, B.C.

MIKE SCHAFER

Mr. Kovalchick's full-size train set

Saved by a scrap dealer, East Broad Top is a tourist-line pioneer and survivor. After some dark times, its future may be brighter

By Dan Cupper • Photos by Don Wood

IN THE MID-1930's, about the time the railfan hobby began to gather momentum, enthusiasts discovered Pennsylvania's narrow-gauge East Broad Top Railroad as a living page from the past. Out on the main lines of North America, railroads had turned the page and were moving on to diesels, streamliners, CTC signaling, and later, piggyback and unit trains.

EBT was not interested in turning any pages. Opened in 1873, the line still embodied the world of steam-powered, kerosene-smudged, brass-journal tradition. Enthusiasts journeyed to south central Pennsylvania to absorb the ambiance of 3-foot-gauge 2-8-2's, wooden coaches, and mountain railroading in the coalfields. From 1936 to 1951, fans chartered seven excursions on the line.

When the curtain fell on the 32-mile common carrier in 1956 and a scrapper bought it, nobody expected what came next. Reborn as a tourist line in 1960—the same year regular-service steam disappeared from U.S. main lines—EBT became one of the earliest and best-known preserved steam railroads. It has always been one of the most authentic. Today, it stands as one of the longest-lived.

As the trunk lines dieselized, short lines followed suit. General Electric, promoting its family of small diesels, took credit for keeping many little pikes afloat. In fact, GE in 1955 proposed diesel-ing EBT with a pair of 65-tonners and a tiny yard switcher, but the railroad and its associated mining company declined. Instead, EBT sought permission to abandon. The final revenue train ran on April 6, 1956, and soon thereafter, scrap dealer Nick Kovalchick of Indiana, Pa., bought the property.

In spring 1960, the town of Orbisonia, Pa.—adjacent to EBT's headquarters and site of its roundhouse and shops in the borough of Rockhill Furnace—was preparing for its bicentennial. Town leaders asked Kovalchick to consider putting an engine on display. He stunned them by fixing up 3 miles of track, reactivating two engines, and announcing that EBT was again open for passenger business.

As his son Joe, who was 19 at the time, now recalls, "My father was very proud that we were going to reopen the railroad. He made a speech and said that he wished that the train would run again and again and again."

The full-size model railroad

As the 1950's closed, nobody knew a steam tourist railroad industry would develop, only that steam everywhere was on life support. One by one, railroads ran farewell-to-steam excursions.

For assorted reasons, much of the

Tourists crowd the station platform at Orbisonia, Pa., on August 14, 1960, the day after the EBT reopened for business. Such scenes no doubt inspired subsequent tourist railroad ventures.

steam and tourist-railroad activity centered on Pennsylvania. On October 25, 1959, the Reading Company created a sensation by running an excursion behind T-1 4-8-4 2124, the first of what would be about 50 "Iron Horse Rambles" the railroad sponsored through 1964. About the same time and also in southeastern Pennsylvania, near Lancaster, a group of railfans had gotten together enough cash to buy the struggling Strasburg Rail Road. In 1959, the line began carrying tourists behind a Plymouth gasoline-mechanical switcher. By the next summer, Strasburg had bought an ex-Canadian National 0-6-0 and was working toward a Labor Day steam-up.

Over at the East Broad Top, a skeleton staff of four or five office people had remained on the payroll since 1956 to tend to non-railroad operations. These included coal properties, timber lands, and rental housing—all the elements of the "& Coal Co." phrase that tagged behind the railroad's name. Despite having sold some cars, EBT still owned all six of the narrow-gauge Baldwin 2-8-2's that it had on hand at the end of operations, plus two standard-gauge Baldwin 0-6-0's used at the dual-gauge interchange yard at Mount Union, on the Pennsylvania Railroad main line. EBT also owned more than 200 hopper and other freight cars, four wooden passenger cars, two wooden cabooses, and a

Millie Kovalchick, Nick's youngest daughter, christens EBT 2-8-2 No. 12 with ginger ale during the August 13, 1960, reopening ceremony.

steel gas-electric car. Also intact were EBT's headquarters office and passenger station at Rockhill Furnace, along with an eight-stall brick roundhouse and shaft-and-belt-powered machine shop.

The tale goes that Nick Kovalchick bought EBT because he never had an electric toy train set during his childhood. His son Joe, who now runs the railroad, vouches for that story.

"The toy-train story is absolutely true," he said. "As a boy, he thought he was going to get a toy train through the Sears catalogue." Something fell through and when the boy became the man, he corrected that. "With EBT, he got not only the train but the coal mines, timber land, rolling stock, roundhouse, shops—it was a complete train set. That's why he kept it intact."

In May 1960, today's EBT General Manager Stanley Hall was about to graduate from high school. He was working evenings for his father, a self-employed painter and carpenter, helping to restore a fire-damaged Orbisonia church. Every day, EBT Operating Vice President C. Roy Wilburn and his wife took a stroll through town. They got in the habit of stopping to view the progress on the church, and got to know the teenager. On one visit, Wilburn announced that the railroad was going to reopen and needed painters for the summer. Soon, Hall was hired.

"I came over and started to paint," he said, and found himself working with McKinley Moore, a veteran EBT carpenter. "We built the two open cars, the boxcar and flatcar, painted them all up, painted the station all up, and built bathrooms here at the station. I [came] here three days after graduating from high school and have been here ever since, never lost a payday."

Hall remembers the day EBT came back to life. It was June 7, 1960. "I was painting out front [of the station]. Mr. Wilburn came down and said, 'Come on.' He had something he wanted me to see and listen to. So I laid my brush down in my bucket, and we walked up through the parking lot and [EBT engineer Philip Ott] was just backing the 12 out on the [turn]table for the first time."

When Ott pulled the whistle cord, Hall said, "there were probably three or four hundred local people . . . and there wasn't a dry eye, nowhere in the crowd. For the people, their heritage had come back. It was good to see that lost piece of your life back . . . and it still sounds good [today]."

August 13 was opening day, and the entire Kovalchick family was involved in the ceremonies. "My mother and father, my sisters and myself," said Joe Kovalchick. "My youngest sister Millie [for whom 2-8-2 No. 12 was named] christened it, breaking a bottle of ginger ale over the cowcatcher."

Hall characterized the reopening this way: The elder Kovalchick "had the railroad, he had the coal company, he had the company towns, he had the coal mines, he had the timber acreage . . . No, he didn't scrap it—he sat on it, knowing sooner or later someone would realize what an industrial piece of heritage he had, complete. When the town wanted him to set an engine out, it looked to me like that was his calling to put his model railroad in operation."

"We couldn't haul all the people"

By opening day, Mikado No. 15 was also in steam. For the first season, only 3 miles of track north from Rockhill were open, with no turning facilities, so trains operated shuttle-style. One engine drew the train north and the other backed up behind it, ready to couple on

and pull the train south on the return trip. Trains ran daily until after Labor Day, then weekends through October.

"Nobody knew whether the place would go or wouldn't go," said Hall. "I think Mr. Kovalchick knew that he was going to run more than one week in August. And I think everybody got their eyes opened. We couldn't haul all the people. There were more damn people that come to ride the East Broad Top than Rockhill had ever seen. We were hauling until 10 or 11 o'clock at night."

In 1960, he said, "nobody was into the tourist stuff real big. I don't think Mr. Kovalchick knew much about the tourist business, I know none of us did, and I don't think Mr. Wilburn did. [He had been] operator of a . . . [common]-carrier railroad, not a for-fun railroad.

"There weren't any other [tourist] railroads in Pennsylvania. Strasburg was down there but . . . [in 1959-60] it didn't do nothing. I remember when we hauled more people than Strasburg dreamed about hauling. They didn't even have a locomotive—they had that little gas vehicle. But things sure the hell changed."

Yes, they did—Strasburg, in a tourist-rich Amish area, hauled 8700 passengers in its first year, but topped 400,000 in its best season during the 1990's. The more remote EBT hauled 28,000 people in 1962 and then averaged 21,000 a year for some time. In 1988, EBT reduced its schedule, eliminating weekday service and trimming operations to three trains a day on weekends, June through October; in 1989, it carried 14,000 riders.

Even with the ridership decline, EBT has persisted. Since 1960, at least 19 steam tourist lines have operated in Pennsylvania. Many are gone now, and others have turned to diesels. Only 6 still run steam, and EBT is one of them.

With that first frenzied year behind them, EBT's owners made plans to reopen for regular service. "After the first season, there wasn't really much thought about continuing it," said Joe Kovalchick. "It just kind of followed as a natural event. Our feeling has always been, an operating railroad is worth more to everyone than a dormant railroad."

Hall noted: "Twenty-four of us started here in 1960 and, of course, there was a lot of work that had to be done . . . When they decided to run in '61, why, most of us were brought back, and we got some more of the work caught up."

One task was extending active mainline trackage north more than a mile to the former Clay Spur, where two switches were added to create a wye. A picnic area, Colgate Grove, was built here. Because the Rockhill yard also included a wye to connect with EBT's former Shade Gap Branch, trains could be turned at both ends. This placed the engine always at the front running pilot-first and the passengers always facing forward, a rarity in the tourist-railroad world.

Men waving from the rear of parlor car *Orbisonia* on opening day are (from left) C. Roy Wilburn, Mike Kovalchick, and Nick Kovalchick. Behind Wilburn and the policeman is Joe Kovalchick.

Over the next years, EBT settled into a pattern of running trains during the tourist season, June through October, alternating among Mikados 12, 14, and 15. Engine 17, one of the three largest on the roster, was also returned to service but normally wasn't used except during the final weekend of the season, and for special events. Aside from railroad, the staff managed the affiliated enterprises year-round, which produced revenue to help subsidize the railroad.

In 1963, Railways to Yesterday, Inc., set up a standard-gauge trolley operation on the Shade Gap Branch, and the following year, the National Park Service designated EBT a National Historic Landmark. Railfans became even more engaged with the line in 1966 when RTY chartered the railroad for the first of many annual February "Winter Spectacular" weekends. Hall remembers them as "the ugliest weekend of the whole winter [with] snows . . . there was only one or two that we put on that was decent weather. Mostly it was severely cold, heavy snows, [and] awfully hard on the personnel and the equipment, but awfully enjoyable for the fans."

Although the Spectaculars were popular, EBT ended them after the 1981 edition, because, Hall said, "what you may profit, you mostly [lost] on the equipment in frozen pipes and injectors."

EBT unsuccessfully tried a spring railfan weekend, then found a winning formula again with a fall Spectacular. It was during the latter winter Spectaculars and several fall Spectaculars that EBT got its biggest splash since 1960 in the railfan press by running three and sometimes all four of its operable steamers.

> When No. 12's whistle first blew, "There wasn't a dry eye in the crowd. Their heritage had come back. It was good to see that lost piece of your life back."—*EBT G.M. Stanley Hall*

During this time, upper management began a generational shift. Joe Kovalchick explains: "I took on a lot of the responsibility along with my father in the mid-'60's. After his first heart attack in '69, I stepped in and took hold of the reins." Nick Kovalchick died in 1977.

Heritage tourism gained cachet in the 1990's, and for a while, the National

The biggest news

FROM EMD: Biggest News Since 1939." TRAINS' headline was set in the usual conservative 18-point type, but the words fairly screamed from page 3, atop the July issue's lead "News & Editorial Comment" story. Electro-Motive, proclaiming its "most important announcement since the 1939 introduction of the FT," unveiled an all-new line of locomotives on June 3, 1965.

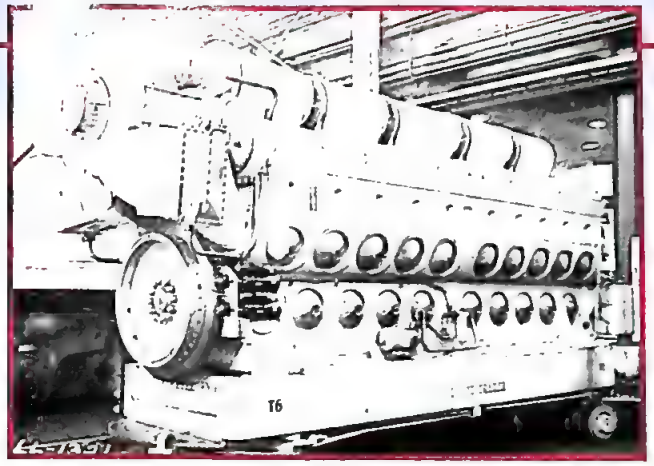
At first glance, the EMD-supplied line drawings of the nine new models that occupied pages 8-9 appeared to be little more than refinements of the builder's already successful line of SW, GP, and SD models. Substance had long since trumped style in the locomotive business, however, and the substance of EMD's new line was a brand-new prime mover, a successor to the legendary 567 engine.

Enter the 645.

Like the 567, EMD's new engine took its designation from its cubic-inch-per-cylinder displacement. From the 8-cylinder, 1000 h.p. normally aspirated engine in the SW1000 to the turbocharged 20-cylinder power plant in the 3600 h.p. SD45, each of the nine new models would be 645-powered.

Superceding all 567-engine models in EMD's domestic catalog, the so-called 1966 model line included two end-cab switchers with 8-cylinder 645's, the SW1000 and SW1500 (with corresponding horsepower ratings), and two normally aspirated 2000 h.p. road-switchers with a 16-645, the GP38 and SD38 (B-B and C-C, respectively, of course). A turbocharged 16-645 powered the 3000 h.p. SD40 freighter and a steam-generator-equipped SDP40 passenger version. Atop the list, packing a 20-645 rated at 3600 h.p., was the SD45, also available in the SDP45 version. Initially, a twin-engined, 6000 h.p. DD40A was offered, but it found no buyers and was dropped from the catalogue (although UP later commissioned its own, unique DDA40X Centennials).

A two-cycle, 900-rpm machine with a 9 1/16-inch cylinder bore and 10-inch stroke, the 645 was the direct descendant of the 567. Indeed, the new power plant kept many of its predecessor's dimensions and specifications, including



1965: EMD INTRODUCES THE 645 ENGINE

Who would have dreamed that a handful of black prototype units would sire more than 10,000 U.S. locomotives and sustain Electro-Motive for over two decades?

By Greg McDonnell
Photos, J. David Ingles collection

since 1939

KEN CRIST; INSET PHOTO, EMD

cylinder-spacing, stroke, crankshaft, and compression ratio. Moreover, the 567 block could accommodate 645-series power assemblies and thus be upgraded and updated.

It was no secret that the venerable 567, introduced in 1938 and rated at 1350 h.p. in its first 16-cylinder application, the FT of 1939, was being taxed and turbocharged to the limit to produce 2500 h.p. in the GP35 and SD35. Inasmuch as a 392,000-lb. locomotive can be kept secret, EMD had played its plans for a 567 successor close to the vest. By 1964, though, an unlettered six-motor hood unit numbered 434, painted in plain blue and yellow to match units it ran with, was seen testing on Santa Fe freights—and tongues began to wag. The 434, was, according to the caption of a May 1965 TRAINS news photo, a "rumored prototype of a new line of locomotives containing a high-horsepower replacement for the 567-series engine . . ."

EMD kept mum, but behind 434's unmarked blue hood, the mysterious C-C unit secreted the first locomotive application of the as-yet-unannounced 645, not to mention the builder's new AR10 alternator, the foundation of a new A.C.-D.C. transmission. Constructed on an SD35 frame, the 434 had six new D-77 traction motors slung on its Flexicoil trucks plus a host of technological and engineering innovations and improvements. The 434's anonymity belied that it heralded not just a new model—the SD40—but an entire new generation of EMD locomotives.

"Black as Model T's," half of EMD's eight test-bed 645-engine prototype SD40's, devoid of all marking save road numbers, roll under I-80 and into Laramie, Wyo., on Union Pacific in May '65. UP wound up buying 434A-H, as its 3040-3047.

BY SPRING 1965, the cat was pretty much out of the bag. Nine black cats, to be precise, as, to quote TRAINS Editor David P. Morgan, "black-as-Model T" 645-powered test-bed locomotives were outshopped from La Grange during February-April of that year. Joining blue EMD 434 in road tests and demonstration tours were eight more SD40 prototypes numbered

Outshopped in 1964, disguised in blue and yellow to test on the Santa Fe, EMD 434 rested at the Chicago Great Western's Chicago facility on February 20, 1966. Later sold to Gulf, Mobile & Ohio as No. 950, this historic unit has been upgraded and is still in daily service for CN as Illinois Central 6071!

J. DAVID INGLES

On the following July 1, the first pre-production GP40, EMD 433A, was at the same spot, next to a CGW NW2 and coupled to three EMD test vehicles: F unit 462, test car ET-909, and SD45 4351. With just four or five trains a day, CGW's main line was underutilized and made for a handy EMD test track.

434A-434H, plus a single pre-production GP40 numbered 433A. They bore no identification except the numbers on the cabs and in the indicator boxes.

On the heels of the official announcement of its new 645 line, EMD's salesmen, it seemed, were inking orders for the new models almost as fast as the test-beds barnstormed their way across the U.S. and Canada. Eclipsing the 83,000-mile, 11-month 1939 tour of FT A-B-B-A demonstrator 103, the 11 pre-production 645 prototypes racked up over a million miles in road service on nine railroads.

In fall 1965, workers at La Grange began lowering 16-645E3 engines and AR10 alternators onto the frames of the first production 645-powered locomotives, 14 GP40's assigned order No. 7851, which by November would emerge as New York Central 3036-3049.

Delivered ahead of lower-numbered sisters 3000-3035, the polished black GP40's hit the road on Central's hottest freights. They weren't pretty, with their solid-black garb accented only by a white frame stripe and the necessary NYC identification, but anyone introduced to the 645 by these shiny black Central hoods cruising along Broadway in Buffalo with a hot Super-Van intermodal train, or wheeling New York-bound hotshot NY-4 across the Canada Southern at a mile a minute or better, knew instantly that the EMD ad man who penned the "fast and sure!" copy wasn't exaggerating.

"Fast and Sure!" The headline anchored a distinctive Tom Fawell painting of NYC GP40's on a Flexi-Van train in the centerspread EMD advertisement in May 1966 TRAINS, but the slogan could have been applied to the sales performance of the new 645 line. Almost overnight, EMD's order books were bulging with contracts for the new line. More than 1000 645-engined locomotives rolled off the La Grange assembly lines in 1966, and the customer list looked like an *Official Guide* index, from Atlantic Coast Line, Bangor & Aroostook, Chicago Great Western, and Detroit, Toledo & Ironton through Texas Mexican, Union Pacific, Vermont Railway, and Western Pacific.

By the end of 1966, the sound of the 645 was anthemic of contemporary railroading, from the robust vocals of Cuyahoga Valley SW1000's laboring in the industrial canyons of Cleveland to the chant of Maine Central GP38's echoing over the White Mountains through Crawford Notch, N.H., and the turbocharged howl of SD40's assaulting Sand Patch, Horseshoe, Sherman, and the Selkirks. High-nose Norfolk & Western GP40's rolled Red Balls across the former Wabash, and multipled Indiana Harbor Belt SW1500's lugged transfers across Chicago. GO Transit hauled Toronto commuters behind custom HEP-equipped GP40TC's, while *Empire Builder* and *Western Star* passengers rode behind Great Northern SDP40's which provided them with steam heat and a 645 symphony to accompany the scenery.

THE 20-CYLINDER SD45, heavy hitter in the 645 lineup, was the quintessential Sixties muscle machine. The first-ever '45, EMD demonstrator 4351, debuted in December 1965, and in contrast to the somber black of the 645 prototypes, EMD decked out 4351, and then siblings 4352-4354 (during the first half of 1966), in a dramatic rendition of GM corporate blue and white. Great Northern, the first to purchase "America's most powerful single-engine diesel locomotive," had *Hustle Muscle* stenciled on the hood of No. 400, first of its eventual fleet of 27 SD45's.

Hustle muscle, indeed. Even standing still, the SD45 looked and sounded powerful, with its pug nose, flared radiators, and the impatient champing-at-the-bit chant of its big V-20. To stand in the presence of two or more '45's waiting on the signal to get out of Bakersfield or Birmingham, Williamsport or Whitefish, was to feel the presence of power. To be at Alliance, Ohio, on a cool autumn evening when a trio of SD45's—beckoned by the three vertical lights of a PRR signal—shook the depot to its foundation and threatened to loosen the platform bricks as they worked westward with 100 cars of coal, was to *know*

J. David Ingles

No anonymous black test units, these, EMD's SD45 demonstrators 4352-4354 (in mixed order) roll west from Detroit at Romulus, Mich., on April 8, 1967, with a Norfolk & Western freight on the old Wabash, bound for Decatur, Ill. The trio would later serve D&H and EL; EMD 433A became IC 3075.

power. Ditto to stand atop Tunnel 2 in the Tehachapis as seven gray and scarlet SP SD45's—four up front, three deep in the train—clawed their way toward Bealville with an eastbound freight. To feel the energy generated by 25,000-plus turbocharged 645 horses telegraphed through every nerve in your body was to *know* the 645.

If there were any suspicions that EMD might have been a bit overzealous in its announcement heralding the 645 engine as the biggest thing since 1939, they were dispatched in the dust kicked up by GP40-hauled Super-Vans, drowned in the turbocharged howl of V20's, and overwhelmed by the volume of first-year 645-model sales. If anything, EMD may have underestimated the potential of the new power plant it formally introduced on June 3, 1965.

Who, even among the engineers on the original design team, would have dared to dream that a handful of drab black prototypes would sire more than 10,000 645-powered locomotives in the U.S. and thousands more worldwide? Or that the nine-model catalog of 1965 would soon swell past a dozen as such logical extensions as the GP39 and SD39 came about, along with custom machines like the full-cowl F45, FP45, SDP40F, and F40PH; UP's monster Centennials; and Milwaukee Road's light-footed SDL39. The 645 would sustain EMD for over two decades, through the Dash 2 era and to the end of 50 Series production in 1987. Thanks to the passenger trade, the 645 would remain in production along with the F40PHM-2 until the end of 1992.

Yes, the 645 was indeed the biggest news since 1939 . . . and then some. ■

Louis A. Marre

Henry G. Goerke

On December 8, 1965 (above), the third and fourth of the first 14 production 645-engine locomotives, New York Central GP40's 3039 and 3038, rest at Riverside Yard in Cincinnati, the site of NYC's last steam run eight and a half years before. In March '65 near Detroit, the same unit leads two sisters south on NYC's Dearborn Branch (below) as they approach the DT&I crossing at Schaefer Tower.

Just a hint of green

On a trip "up north" to see the brand-new BN, two travelers savored the falling flags of the Great Northern and Northern Pacific

By J. David Ingles • Photos by the author

All units present here at Dilworth, Minn., the former NP facility serving Fargo-Moorhead, on May 14 are ex-NP: GP9 1760 and F9A 830 in Cascade green, bracketing unrepainted (but renumbered) black-and-yellow F9B 831, which hides behind 802, one of three NP RS1's.

WHEN THE LONG-ANTICIPATED "Hill Lines" merger finally created the Burlington Northern on March 2, 1970, it was time not to mourn the loss of a favorite, the Chicago, Burlington & Quincy, but to embrace and record the details of the changeover. I had been through this six years before, when the Norfolk & Western leased my beloved Wabash, and had decided that since I couldn't do anything about it, I might as well roll with the merger punches. I would go through the process again two years after the BN with the melding of the Gulf, Mobile & Ohio and the Illinois Central.

So as the old, familiar horses in the gray, silver, red, or black of the Burlington Route stared at a Cascade green future, I was making increasingly frequent visits from my central Illinois home up to Galesburg, Chicago, and other nearby busy CB&Q points.

Each new or bigger merger-created railroad in the 1960's and '70's tackled its locomotive renumbering and repainting with a different philosophy and at a unique pace, depending on its spending philosophy and motive-power needs. BN quickly plunged into its planned renumbering, and did so neatly, but was slower at full repainting. It would not be until September 1977 when BN officially rolled out the last of its 1709 inherited diesels in Cascade green, ex-Spokane, Portland & Seattle Alco RS3 4064, at Spokane, Wash.

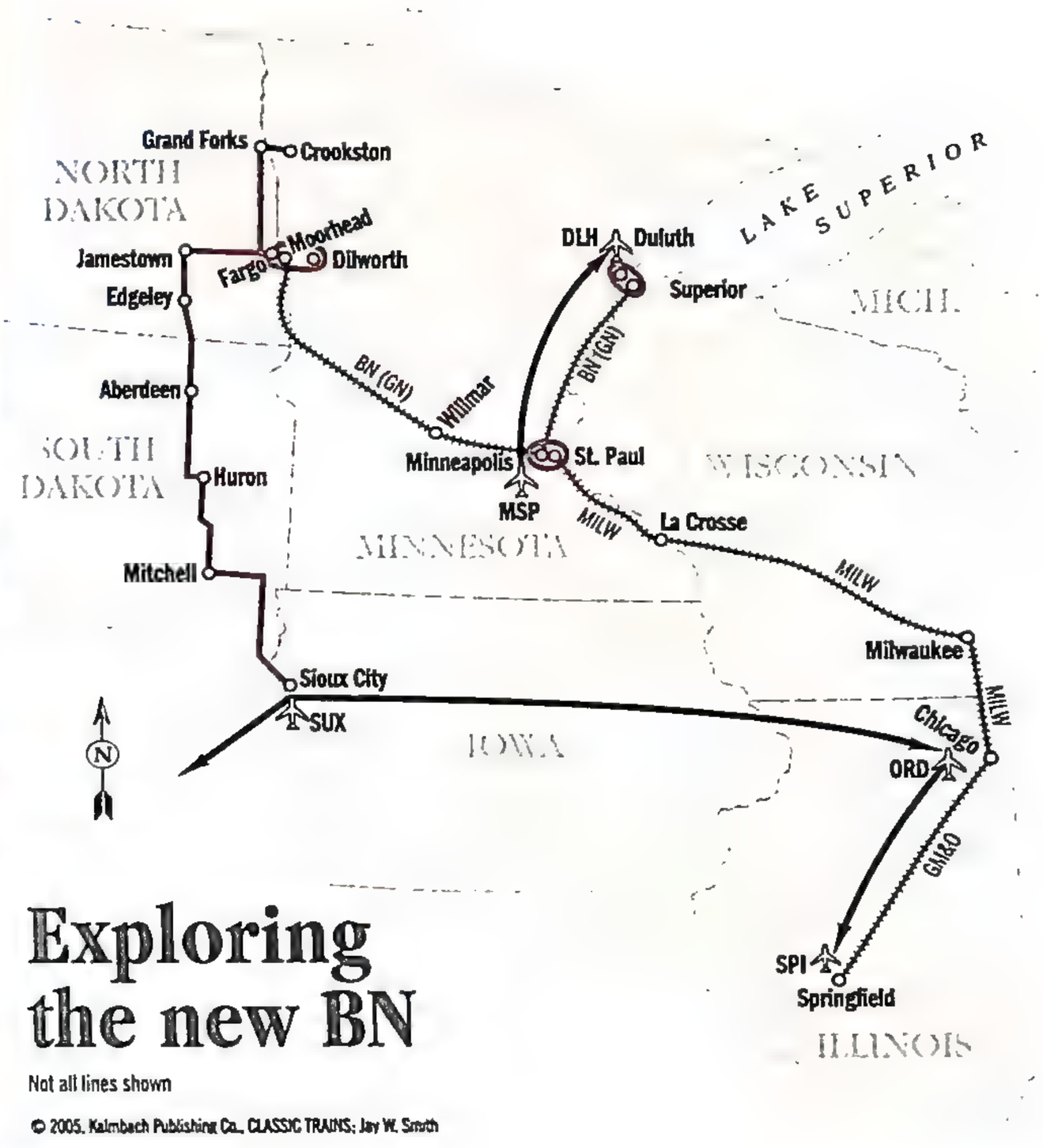
Burlington's Twin Cities transfers out of Dayton's Bluff yard in St. Paul were the province of m.u.'ed trios of NW2's, members of a class delivered as TR2 cow-calf sets. Only the lead unit has been renumbered in this May 10 photo (top).

At Minneapolis Junction on the same day, renumbered NW5 986 (right), the former 186 and first of GN's 10, displays original colors but is minus the emblem on the cab. Visible at the right, beside the roundhouse, is a CB&Q SD45 wearing the merger-harbinger "hockey stick" green-and-white color scheme.

Meantime, eight weeks after the merger, while we could see what was happening on the old "Q," what about the diesels of BN's two "northerns"—Great Northern's green-and-orange fleet and Northern Pacific's green, and yellow-and-black, brothers? When a Colorado friend, the late Ken Crist, traveled east for a Midwestern visit, and I had a week's vacation due, he and I quickly put together a weeklong rough itinerary to go "up north" and see for ourselves. What we wound up doing was more on the order of having a last look at the GN and NP than getting a first look at the BN.

We didn't even ride the BN to get there. We could have, but our best schedule put us out of my hometown, Springfield, Ill., in the afternoon, on GM&O's *Limited*, which arrived in Chicago Union Station at 9:30. The overnight former Burlington *Black Hawk* had been discontinued, so our only choice as a connection was Milwaukee Road's *Pioneer Limited*, which left CUS at 10:30 p.m., an hour after the sleeping-car was open to board.

Remember the Rail Travel Card? My notebook indicates that I charged mine $59.10 for Ken's and my train tickets on GM&O and Milwaukee, and I paid an extra $14.75 in cash for a roomette on the *Pioneer*. Although this was a pleasure trip, I kept expense notes because, with credit cards involved, it was easier for one of us to pay for both when using the cards (I almost said "plastic," but remember, the RTC was cardboard!). Ken bought dinner



Exploring the new BN

Not all lines shown

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At Minneapolis Junction enginehouse on May 11, just east of the roundhouse visible in the NW5 photo, two of GN's 14 F45's are in a trio with one of GN's 27 SD45's. They are parked next to a set of leased Southern Pacific Alco C628's. Today, restored Milwaukee Road 4-8-4 261 and its train are kept at this facility.

for us on the GM&O, $9.25 on his RTC plus a $1.50 cash tip. Ya gotta love those 1970 prices!

Once again in the Twin Cities

Fresh and ready to tackle some of the "Northern" in BN, we arrived in St. Paul Union Depot (SPUD) on the morning of Sunday, May 10, and rented a car that would be a $63.77 charge on Ken's Hertz credit card for two and a half days of touring. (He would put the $38.76 bill for our two-night hotel room at the St. Paul Holiday Inn on his Master Card, and my notes show I paid cash for one Holiday Inn dinner for both of us—$10.28.)

We had both "done the Twin Cities," diesel-wise, two and three years previous and so knew where we were going. BN's predecessors had four major engine locations we targeted: CB&Q's Dayton's Bluff in St. Paul; NP's Mississippi Street in St. Paul and Northtown in Minneapolis; and GN's Minneapolis Junction north of downtown (where Milwaukee Road 4-8-4 261 is housed today). GN's passenger units stayed over at the SPUD roundhouse.

In general, we found that Great Northern's EMD switchers had been renumbered, but the ranks of most other diesel types with new numbers were slim. The new carrier's standard was to apply BN initials and the new number in white on the cab. On many models, this necessitated removing the predecessor's emblem, a practice we found had been performed with a vengeance on

After heading south out of the former GN yard in Superior, the twice-weekly Ashland Turn of May 13 has passed Central Avenue tower and is backing through the crossovers (top) onto the former NP line (also used by GN passenger trains) toward Superior's joint station. After clearing the interlocking, the two RS11's have swung through the sharp connection onto the old NP East End line and are heading northeast (above).

the noses of GN and NP F units, where it wasn't even necessary. We guessed that many of those emblems wound up in employees' basements.

All told in our stay in "the Cities," we photographed about 100 BN-family units, of at least two dozen models, from all three builders, but only about 35 percent had been renumbered. As usual, the minority Alcos are most fondly remembered: NP RS3's and RS11's, which shuttled to and from the Twin Ports of Duluth-Superior, and some leased Southern Pacific C628's.

Unusual EMD's included trios of CB&Q NW2's employed in transfer runs, and a GN NW5, one of 10 on the roster. Yard and transfer operations were not yet changed, although mixed road-unit sets had been common since before the merger. Former GN yards were still the province of green-and-orange NW2's, and black SW's still ruled at the NP spots.

Little remarked is BN's short stint as an intercity passenger railroad—only 14 months. The former GN *Badger* and *Gopher* linking the Twin Cities and the Twin Ports still rated one of the 10 ex-GN E7A's, sometimes with a boiler-equipped GP9 as trailing unit. BN's two transcontinental trains on the former NP still employed Loewy-green F9's, but the two trains on the former GN had mixed sets—

CB&Q E8's or E9's bracketing a GN passenger F3B or F7B, trios which ran through from Chicago to Havre, Mont., before being changed out for solid consists of F's for the mountains.

Although we wanted to, and did, concentrate on the BN, we didn't ignore its neighbors, photographing units of eight other railroads. In addition to SPUD's 44-ton GE ["Bumping Post," Fall 2002 CLASSIC TRAINS] and Minnesota Transfer's switchers, we tracked down Baldwins on the old Chicago Great Western (merged into C&NW in 1968) and Minneapolis, Northfield & Southern; found Soo Line's two Alco DL640 (RS27) "Dolly Sisters" (as they were later nicknamed); and shot Rock Island Geeps, Milwaukee Road Baldwins, and a pair of its yellow FP45's on a freight, plus a C&NW U30C.

At the Twin Ports . . . what merger?

By Tuesday midday, it was time to move farther north. I wasn't yet much of a flyer, but the smart way to save some time was to take to the air for the short jaunt to Duluth. We did this on a North Central Convair 580 for the magnificent sum of $37.80 on Ken's BankAmeriCard.

At the Twin Ports, we found a different BN scene—not much had changed at all. Of the 65 or so BN-family diesels we photographed around Duluth-Superior in just over two days, only 19 had been renumbered and only one, SD9 6101, was repainted Cascade green. Most of the renumbered units were ex-GN or NP F's, in on road freights from the Twin Cities or Grand Forks, N.Dak.

As in the Cities, terminals hadn't changed much.

The former Great Northern SD9's that inhabited Superior, Wis., and BN's Mesabi Range iron-ore lines had not been touched by the merger, except for fully repainted 6101, the former GN 574. Both photos were made on May 13 in Superior.

The local yard jobs and ore-dock pullers remained the province of the GN SD9's, plus some NP Alcos. We followed the Ashland (Wis.) Turn as it zigzagged through the Central Avenue interlocking in southern Superior with two NP RS11's up front and a GN caboose on the rear. By the big grain elevators on the Superior waterfront, we found one of the three NP RS1's, and here and there in both Duluth and Superior were NP Alco S2 and S4 switchers, plus BN's only S6, which we shot near the Missabe Road ore dock in Duluth.

The active roundhouse was the former GN's in Superior, and nearby was the home yard of Lake Superior Terminal & Transfer, the jointly owned switching road whose NW2's wore GN green and orange. We gave about equal time to non-BN roads in the Twin Ports, going out to Proctor on the Missabe and to West Duluth on the Duluth, Winnipeg & Pacific. We also found various Soo and Milwaukee units, plus a red CGW SD40 on a C&NW transfer.

To Fargo via Minneapolis

With the Twin Ports under our belts, our next target was eastern North Dakota, new turf for both Ken and me, and this time we'd ride the rails—BN rails, in fact. We thought about flying—Northwest had seven flights a day from Minneapolis to Fargo, coach fare $23.10 ($6.40 more for first class)—but decided that this was, after all, a railroad trip.

Despite being deep into the immediate pre-Am-

Extra cars a couple of days before necessitated a GP9 be added to the *Badger-Gopher*'s usual E7, and the two-unit consist stayed on the train for several days. That's the northbound *Badger* (top) of May 13 as seen from the steps of Saunders Tower in Superior, Wis.

Amtrak's *Empire Builder* today still calls at the old GN station area in Fargo, where BN 27, the *Western Star*, halted in the rain on May 14, 1970 (right). The ex-CB&Q E8's (sandwiching an ex-GN F booster) will come off at Havre, Mont., for a solid F-unit consist.

trak era of train-offs, BN still fielded 19 pairs of passenger trains systemwide, from the lofty *Denver Zephyr* to the lowly Havre-Great Falls (Mont.) RDC and the Oregon Trunk mixed. The old NP Duluth-Staples (Minn.) RDC connections to the *North Coast Limited* and *Mainstreeter* were gone, so we'd have to go the long way around to Fargo, via the Twin Cities on the former GN.

The *Gopher*, train 19, made a perfect connection to both the *North Coast Limited* and *Empire Builder*. We'd photographed the *Gopher*, or its twin the *Badger*, three or four times already: an E7 and a GP9, a baggage-RPO, and three coaches (one offering snack service). With a bus connection from Duluth, the afternoon run left from Superior's joint GN-NP station at 5:25 and arrived in Minneapolis at 8:05 after making two stops en route.

We turned in our Budget rental car ($34.85 for the two days) in Duluth and, skipping the bus, taxied over to the Superior station. The agent, naturally, wanted to book us out of Minneapolis on the *North Coast*, since it left first (by 5 minutes, at 9 p.m.) and, despite a longer route (242 miles vs. 232) got to Fargo quicker than the *Builder* (3 hours, 53 minutes vs. 4:30). Stops were a factor—only Staples on the former NP, but four stops on the GN. Ken didn't much care which train we took, but I'd ridden the *North Coast* a couple of times but never the *Builder*, so we were insistent. The agent obliged and booked us on the former GN train; I put our

total $26.18 train fare on my Rail Travel Card.

The ride to Minneapolis was fast, the snack supper acceptable, and the connection at the GN station flawless. Once aboard the *Builder*, we spent most of the trip in the Great Dome lounge, upstairs in the seats as well as on the sofas in the bar below the dome. If I recall correctly, we closed up the lounge well before our 1:35 a.m. arrival in Fargo and adjournment by taxi to the local Holiday Inn ($19.57 for the night, on Ken's Gulf Oil card).

Dakota drizzle

The weather nailed us a bit in North Dakota, with cloudy skies and some drizzle replacing the sun of eastern Minnesota. Most of the Fargo-area's activity was out at Dilworth, Minn., east of Fargo's twin city of Moorhead, Minn. Dilworth was the old NP facility (and is expanded under today's BNSF), and we found a variety of power: more mixed sets of GN and NP F's; another NW5; a lone Cascade green ex-NP GP9, 1760, its bell intact on the roof—which, with Cascade green F9A 830, bracketed NP black-and yellow F9B 831 [pages 80-81]; and a couple of NP Alco S2's plus RS1 802. We watched the westbound *Western Star* make its Fargo station stop (at the GN site where Amtrak's *Empire Builder* calls today), and dropped by Moorhead tower, where the GN and NP main lines crossed. Moorhead yielded a one-car local freight behind a GN GP7 and a caboose hop with GN 905, one of its 16 1350 h.p. GP9M 1958-59 rebuilds (with FT components).

Still under gray skies, we drove north to Grand Forks for the night (the motel was $11.85, in cash).

The old GN roundhouse was full of units, and so were the ready tracks outside. Among the gems we saw were two NW5's and several F's. Our primary target was the next morning, the nameless Winnipeg passenger train. Formerly GN's overnight *Winnipeg Limited* behind E7's from St. Paul but now just a connection to the *Star* at Grand Forks, it came down from Manitoba's capital in late morning and returned in late afternoon. We were curious about nearby Crookston, Minn., and found that the train's route skipped the town proper. Instead, the train would stop at a wye north of town, where a sign indicated a spot to board if anyone was interested. We photographed inbound No. 48 there, in the rain, behind E7 511. This, the last passenger service connecting the U.S. and Winnipeg, was just a couple of coaches, one with a snack-bar.

Back to Fargo we drove, in time to intercept the westbound *Mainstreeter* at Moorhead tower and at the Fargo NP station, and the *Western Star* in both directions. Each *Star* was led by an unrenumbered silver CB&Q E9. Out at Dilworth we ran into GN 400 *Hustle Muscle*, the first production SD45, as middle unit of an SD45 trio in three schemes (NP black, renumbered, and CB&Q green, not yet renumbered—a group which previewed BN's "hock-

Passing Moorhead Tower on May 15, the eastbound *Mainstreeter* (top) had untouched NP A-B Loewy-green F9's on the point and repainted business car A1 on the rear. At Dilworth the day before, an eastbound freight (above) with four mixed F's left for Staples.

After a couple of days of gloom, the sun came out at Jamestown, N.Dak., on NP S2 705 (top), and allowing extra light into the NP roundhouse where the two Midland Continental RS1's were stored.

ey stick" scheme of Cascade green, but with a wide white stripe, which turned out to be BN's passenger livery). Another consist had SP 7012, a leased Alco C628, between a GN F and two NP 7000-series F's. We then went out to the Fargo airport to swap rental cars, exchanging our local-return Budget car for a one-way Hertz vehicle. Our Budget car cost us $44.61, which included mileage charges to Grand Forks and back.

West, then south

Next on our itinerary was Jamestown, N.Dak., 95 miles west of Fargo. Yes, it's on the BN, but it's not a large terminal. Although we did find NP S2 705 at work (and the sun had come out!), we were there to check on the recent demise of a faraway and long-sought-after "pet" railroad: the Midland Continental. A north-south pike with a grand vision, it never amounted to more than a woebegone granger short line. Eureka! Tucked away in the former NP roundhouse at Jamestown were both of the Midland's solid-black RS1's, dusty with disuse. BN was still switching some ex-Midland trackage around town, but the 72-mile line itself was gone.

Lost to history is exactly when Ken and I, having had good luck in the Twin Cities, Twin Ports, and North Dakota's two Minnesota-border cities, decided how to wrap up the trip, but from Jamestown we drove south into non-BN territory. Thirty-five miles out, en route to Aberdeen, S.Dak., for Friday night, we did encounter a branchline local on the former NP, tying up at Edgeley, N.Dak., but that was it for BN until the last city of the trip.

Saturday morning, Ken put the $12.48 Aberdeen motel room on his Standard Oil card (notice how he spread the business around, to have smaller bills due at different times?), and we headed for the Milwaukee Road yard, where a big Baldwin AS616 road-switcher, 562, was working. After photographing the overbuilt Minneapolis & St. Louis brick depot, with "M&StL" engraved in stone but no longer any track in front of it, we headed on south. Not too far out of town we encountered C&NW's triweekly northbound Huron (S.Dak.)-Oakes (N.Dak.) freight, behind two Alco RSD's.

Huron was our next objective, a must-stop 90 miles south of Aberdeen because it was home to North Western's Alco road-switchers. An eastbound freight's departure for Minnesota, behind four of them, was our big reward. Fifty miles farther south, a quick stop at Mitchell yielded only a Milwaukee NW2, and we had to skip Sioux Falls in order to make it to Sioux City, Iowa, in good sunlight.

That was a providential choice, for we wrapped up the trip with some final scores. The first two were mundane Milwaukee SW1200's, but at the Omaha Road yard, C&NW presented us with a Pennsy-like multi-builder mix: two EMD SD9's, an ex-Omaha EMD SW600, a pair of GE U30C's, and a trio of Alco RS3's, including 303, one of the two (of

three) surviving former Litchfield & Madison examples and the very last RS3 built! As we raced the descending sun across town toward the former GN yard, we ran across an Illinois Central Paducah Geep and two GN SW1200's with Flexicoil trucks, one renumbered to BN.

But then, in the last minutes of sunlight, at BN's former GN engine terminal, we hit the jackpot. Oh, one trio of Geeps was colorful but a bit dirty (two GN GP20's, one orange, one Big Sky blue, plus NP GP18 380), but another GP9M, renumbered to BN 1353, was better. CB&Q GP7 261 and BN 166, another ex-GN SW1200 with Flexicoils, added some spice, but the *coup de grace* was, like 1353, in the shadows, tucked in behind a red Q GP7, 265. This was CB&Q 168A, a scruffy "grayback" F7A and the only Burlington F unit known to survive the merger! It didn't last much longer, either. With the sun down and camera bags full of prizes, we headed for dinner and a motel, our merger tour over.

Sunday morning, we turned in our second Fargo car at the Sioux City airport and boarded flights for home, me on an Ozark DC9 for O'Hare, with a connection to Springfield, and Ken on a Western 737, if I recall right, to Denver. This Hertz bill totaled $105, with about 480 miles at 12 cents a mile plus a $15 drop charge (and Ken and I had put a combined $18.84 worth of gas in the tank), but the trip was worth every penny. Especially now, three and a half decades later. ■

Near sunset at Edgeley, N.Dak., the local on an east-west BN branch had just backed in to tie up for the night. Unseen behind the train in this northward-facing view, the crew was walking toward the depot. Edgeley was also the terminus of a Milwaukee branch and the south end of the Midland Continental.

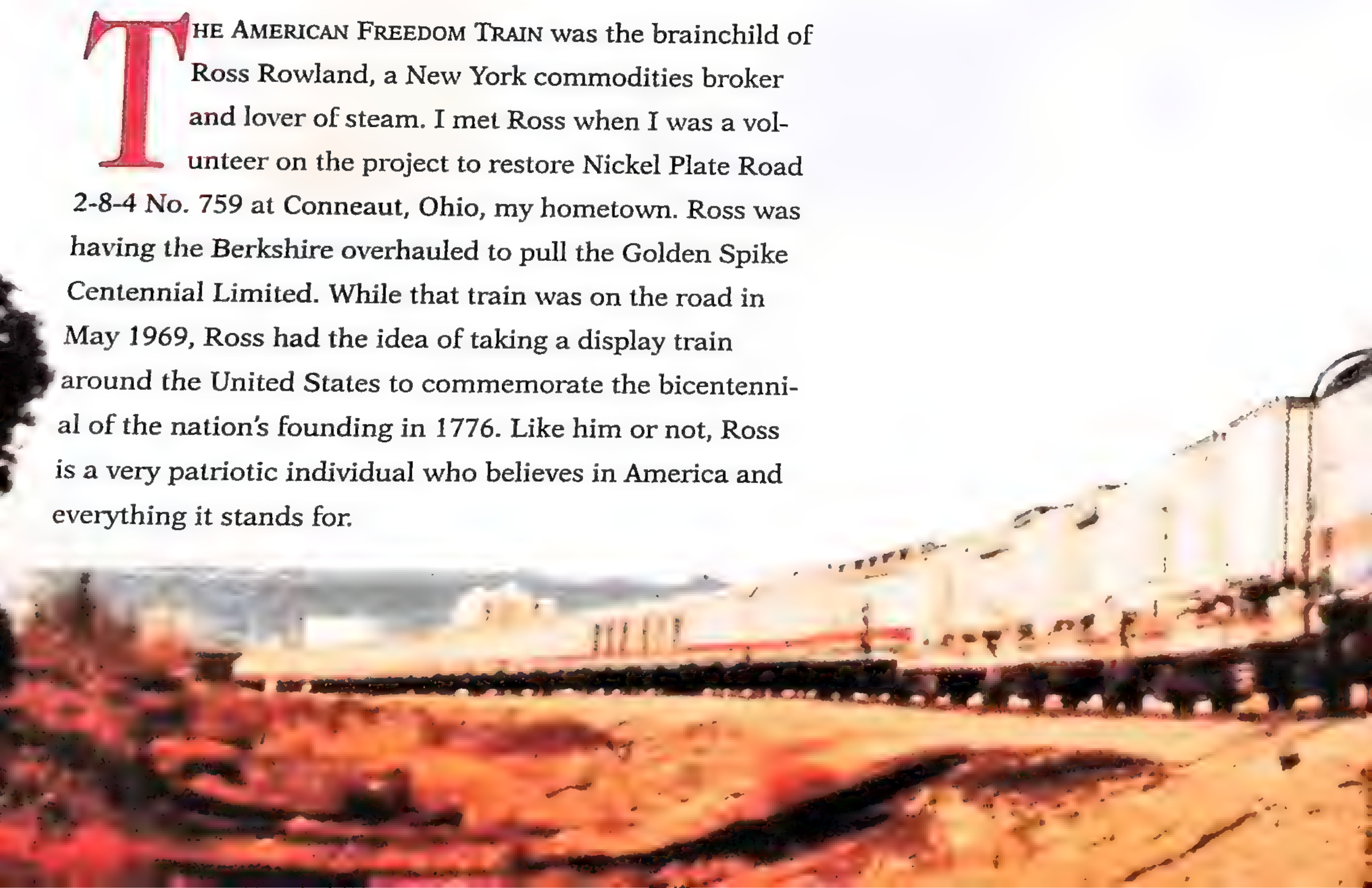
First prize on our fast, beat-the-sunset tour of Sioux City facilities was CB&Q F7A 168A, hiding behind red GP7 265 at the old GN roundhouse.

My two-year Freedom Train adventure

The man behind the throttle of the rolling Bicentennial party's Southern Pacific 4-8-4 recalls a whirlwind of hard work, late nights, and happy trackside onlookers

By Doyle McCormack

THE AMERICAN FREEDOM TRAIN was the brainchild of Ross Rowland, a New York commodities broker and lover of steam. I met Ross when I was a volunteer on the project to restore Nickel Plate Road 2-8-4 No. 759 at Conneaut, Ohio, my hometown. Ross was having the Berkshire overhauled to pull the Golden Spike Centennial Limited. While that train was on the road in May 1969, Ross had the idea of taking a display train around the United States to commemorate the bicentennial of the nation's founding in 1776. Like him or not, Ross is a very patriotic individual who believes in America and everything it stands for.



1975: AMERICAN FREEDOM TRAIN BEGINS ITS TOUR

The American Freedom Train and its ex-SP 4-8-4 cut a striking figure wherever they went, as here at Santa Clarita, Calif. For engineer Doyle McCormack, it was the adventure of a lifetime.

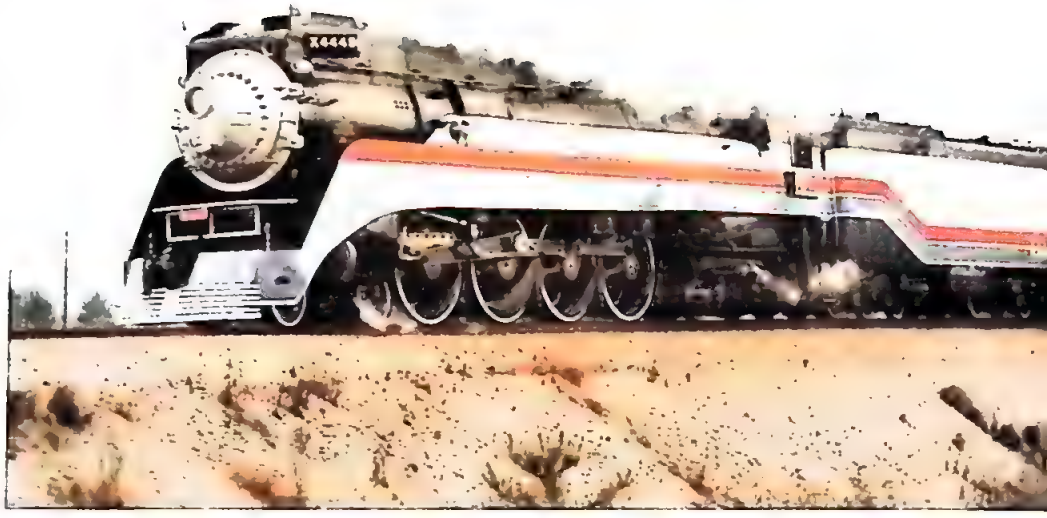
TWO PHOTOS: DOYLE MCCORMACK COLLECTION; MAIN PHOTO BY S. MILWARD

When Ross started promoting his idea, I was asked if I was interested in being part of the project. From 1971 to '73, the Freedom Train idea was on, then off, then on, then off. Finally in October 1974, I got *the* call. The project was a "go," and Southern Pacific 4-8-4 No. 4449 was to be removed from its display site in a park in Portland, Ore., to pull it. I took a leave of absence from my job as a locomotive engineer on the Norfolk & Western and left for Oregon.

For me, it was a case of ignorance being bliss. I was only 32 and thrust into the position of being the Freedom Train's chief mechanical officer and engineer of the 4449—but not really knowing what that all entailed. Thanks to my time on the 759, I was the most experienced member of the restoration crew. Yet I was dumber than a post—too dumb to know I couldn't do it.

We moved the 4449 out of the park on December 14 and took her to Burlington Northern's Hoyt Street enginehouse in Portland. There were five of us on the payroll; Joe Karal, a boilermaker, was our only true restoration expert. Though it seemed tough at the time, the job was fairly simple. The engine was not really in bad physical condition. What we had to do was basically disassemble her, replace what needed to be replaced, and put her back together. We were up against the clock, though, for the Freedom Train was due to start its tour just three and a half months after 4449 came out of the park. We got the job done in 126 days.

On April 21, 1975, we fired her up for the first time, finished the cosmetic touches, and made a test run on BN a few weeks later. We were ready to deadhead east to meet up with the Freedom Train, which was already on the road, having begun its tour in Wilmington, Del., on April 1 behind a former Reading Company T-1 4-8-4.



S. Milward photo; Doyle McCormack collection

Typical of late-night Freedom Train moves, 4449 is ready to leave Charleston, S.C., for Savannah, Ga., where it will be on display the next day.

Learning from a master

We left Portland and headed south on the SP with a short train on June 20, 1975—my wife Laura's birthday. We went up the big Cascade hill from Oakridge, Ore., without a helper, little realizing what we were going to encounter with 23 tunnels ahead. It was like taking a steam cleaner through a stovepipe. When we got to Crescent Lake, we couldn't even see the whites of our teeth.

That's where a tall, gray-haired gentleman in a suit joined us. He was Larry DeBose, SP's road foreman of engines between Crescent Lake and Dunsmuir, Calif. He was aloof, polite, and wanted to run the engine for a while. We left Crescent Lake like we were shot out of a cannon. DeBose seemed to become a part of that engine. I realized that he knew more about running a steam engine than anyone I ever ran across.

That night, in Klamath Falls, I calculated our fuel and water consumption, and found that we had used considerably less of each per mile when DeBose was running. When I saw him the next morning I said, "Mr. DeBose, you know more about running this engine than anyone else, and you're going to teach me what you know."

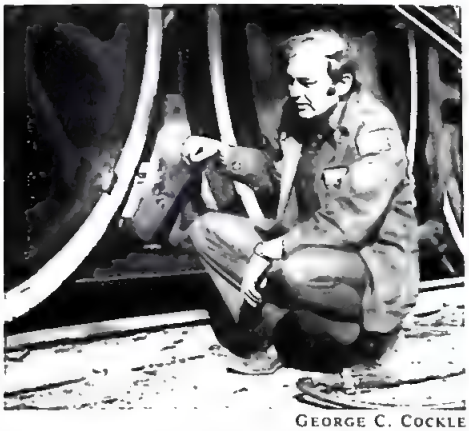
"Son," he said, smiling, "I've been running engines around here since I was 15. My dad ran engines and taught me. Maybe I can show you something." He truly did know about engines. He not only knew how to run them, but why and how they ran.

"Just listen to her, kid," he said to me. "She'll tell you what she wants." I tried, but all I could hear was noise. But after several months, all of a sudden the noises turned to sounds I could interpret, like the subtle changes in the exhaust and running gear. Then it all started to make sense.

We laid over in Sacramento for a day, then ran east on the SP and Union Pacific to Denver. From there we were on the Burlington Northern and, after several overnight stops, got to Chicago

DON R. SHARPE PHOTO; DOYLE MCCORMACK COLL.

En route from Atlanta to Birmingham on the Southern, 4449 cruises through Riverside, Ala., with the Freedom Train in late May 1976.



GEORGE C. COCKLE

McCormack poses with the brakehead-mounted tire-cutting tool devised to trim 4449's drivers.

DAVID LUSTIG

A far cry from the black hulk in a city park she was six months earlier, the 4449 stops for water at Wicopee, Ore., on June 20, 1975—first day of her Portland-Chicago trek to meet the Freedom Train.

the first week in July. We stored the 4449 at EMD's plant at La Grange, Ill., until the Reading T-1 arrived with the train in mid-August. After a changing-of-the-guard ceremony at Chicago & North Western's Proviso Yard on August 4, the American Freedom Train was ours. Our first display-site destination was nearby Crystal Lake, Ill. Before the month was out, we had been to several more—Rockford and Aurora, Ill.; Green Bay and Madison, Wis.; and Minneapolis, Minn., plus all the miles in between, of course, many of them at night.

Although the schedule was brutal, mechanical issues were few. We planned our monthly inspections in advance, shutting the engine down and doing a boiler wash and replacing a couple of staybolts now and then. The only serious problem was uneven tire wear, and by the time we got to the display at West Des Moines, Iowa, in mid-September, that situation was critical. We went on to Omaha, where better facilities were available.

We decided to turn the tires ourselves. The SP, I had learned, had a system of turning tires on a locomotive by putting cutters on the brakeheads and rolling the engine back and forth on a section of track. So we designed some cutters to do just that. With help from the UP, we accomplished the job in two weeks.

While we were laid up in Omaha, UP diesels took the train on to Colorado, Wyoming, Montana, and Utah. After we finished our work in Omaha, we were ready to deadhead to Ogden to meet the train. Union Pacific had its 4-8-4, then numbered 8444, in Omaha getting some spring-rigging work done, and decided it would be a great thing to run the two engines west together. So, we doubleheaded with the 8444 from Omaha to Cheyenne, Wyo., on October 12, 1975—a truly neat experience.

Back on the Freedom Train in Utah, we went north to Boise, Idaho; Spokane; and Seattle. Then we turned south and worked our way down to southern California, where we rang in 1976.

Best of times, worst of times

Seeing so much of America was the most fun I ever had. It was very exhilarating. Some of the best times for me were in the pre-dawn hours, when the sky began turning those brilliant morning colors. I enjoyed looking back at the train stretched out behind me all lit up. The world was mostly sleeping, and I could enjoy the moment.

Everywhere we went, it was neat to see an old-timer bring his grandkids down to see the train. Many were re-

Freedom Train fundamentals

The American Freedom Train was a privately funded exhibition train that toured the 48 contiguous states between April 1, 1975, and December 31, 1976, to commemorate the U.S. Bicentennial. Supporting sponsors were General Motors Corp., Kraft Foods, PepsiCola Co., and The Prudential Insurance Company of America. The 25-car train was displayed at 138 cities and toured by nearly 7 million people during its 24,612-mile run. Total cost was estimated at $17.5 million. To generate support for the project and plan the route, the four-car diesel-powered Preamble Express toured the nation in summer 1974.

For the AFT, former New York Central baggage cars were converted into 10 "exhibit" cars fitted with interior displays and moving walkways to keep the crowds flowing, and 2 "showcase" cars with glass sides to facilitate viewing of the large artifacts they carried. The remaining cars included 2 carrying electrical generators, 3 flatcars for vehicles, ticket booths, and other support items, and 6 passenger cars (press, office, lounge, staff diner, sleeper, and control/security).

Southern Pacific GS-4 4-8-4 4449 (Lima, 1941) was the primary locomotive in the Northeast; Reading Company T-1 4-8-4 2101 (Reading Shops, 1946 [below]) was used, while Texas & Pacific 4-10-4 610 (Lima, 1927 [bottom]) handled the train in the Lone Star State.

JACK WHEELIHAN

McCormack (left) and EMD General Manager P. K. Hoglund discuss the two-cylindered visitor to the diesel builder's plant outside Chicago.

tired railroaders, and I'd listen as Grandpa would tell his little tribe how he had run this very engine. Yes, there were times when this was stretching the truth, but for 5 minutes, that old-timer was a hero to his grandkids. Those are the moments you never forget.

It was tough duty, though. At each display stop, the train was open to the public until 10 p.m., and many times we needed to get to the next city before 2 p.m. to make the 5 o'clock TV news. This often necessitated a departure of 2:30 a.m., which totally screwed up my body clock. The worst part was dealing with railroad people—not the brakemen, conductors, or engineers, but lower-level management, some of whom had terrible communication skills. Our train's upper management would make arrangements with the host railroad's upper management. Then, on the night of the departure, we learned the railroad people on the scene knew nothing about what was going on.

The last day we were in any display city, we'd begin preparing for the move to the next one that night. We had to make sure 4449's fuel and water were topped off and, since she'd been sitting for a while, it was important that we had gone over the engine.

Before we would move, we'd hold a pre-departure briefing, during which our vice president of operations would meet with the local railroad officials so we knew what was happening that night. After that, I'd check with my people, making sure everybody and everything was OK. Next, I would get something to eat, and then, about 6:30 or 7 p.m., take a little nap. From closing time until departure time, it was like tearing down the circus. Everything had to be packed, loaded, and properly stored. The train was usually not in one long piece when we were on display, so we had to switch the train back together and check all the rolling stock once more. By 2:30 a.m., we would be all aboard and ready to depart.

When we arrived at the next city, we usually would have to switch the train apart again. I'd give the 4449 a quick going over. By this time I'd be pretty tired, and my first priority was to get over to whatever lodging we had for that city and crash. Later that evening, I'd grab dinner and try and get a good

WILLIAM ELEY PHOTO; JACK WHEELIHAN COLLECTION

American Freedom Train 4-8-4's 1 (ex-RDG 2101) and 4449 are at C&NW's Proviso Yard, Chicago, on August 4, 1975, for an engine-change ceremony. Ten months later, No. 1 took over again.

night's sleep. During the display days, the crew would go over the engine and make sure everything was in order. When I got a chance, I would start making telephone calls to prepare for the next leg of the trip.

I never had much free time on the road—there was always something to do. All the newspaper, radio, and TV station people wanted to talk to me because I was the engineer. Everyone also had to do "sore-throat duty" on the engine—somebody always had to be sitting in the cab to watch the gauges and talk to the people, who always had a million questions.

Eastward again, then home

After several stops in southern California in January 1976, we headed east. Displays in Yuma, Tempe, and Phoenix, Ariz., were followed by Albuquerque, N.Mex. Next was Texas, where we handed the train over to former Texas & Pacific 2-10-4 No. 610 for a month.

With the 4449 back on the train, from early March to Memorial Day we meandered through Oklahoma, Kansas, Missouri, Arkansas, Mississippi, Louisiana, Georgia, and Alabama. At Birmingham, the Reading 4-8-4 took over again, and we stored the 4449 at Southern Railway's steam shop. The T-1 handled the train for a three-month swing that included Tennessee, Kentucky, Indiana, Ohio, West Virginia, Maryland, Pennsylvania, New Jersey, New York, Connecticut, and Rhode Island.

When the 4449 was on the train, we generally had five paid staff members: Joe Karal, Andy Adams, Russ Shipman, Al Phillips, and me. We also had volunteers to help out, maybe 15 or 20 over the course of the tour. When the T-1 was on the train, the rest of our 4449 paid staff went home, but I stayed on. For a while I was at American Freedom Train Foundation headquarters near Washington, D.C., coordinating the movement of coal for the T-1, on which Ross Rowland generally was the engineer.

Ross eventually had to go back to his business, though, so I ran the T-1 for a couple of months. After that I went back to Birmingham to get the 4449 ready to take the reins again. The swap was to occur at Alexandria, Va., and to get the 4449 to the meeting place, at the end of August we ran her on a fast, two-day trip up the Southern main line to Alexandria. It was the first public excursion for the 4449. At Alexandria, the 4449 took over for the final legs of the tour, through Virginia, the Carolinas, Georgia, and into Florida, where it all ended, as scheduled, in Miami on December 31, 1976. We had made it.

Laura and I were the only married couple on the Freedom Train's locomotive crew to survive the whole adventure—the others either split up or quit. The entire undertaking caused a lot of frustration and pressure. Just about every night, it seemed, I said to myself, "I never want to do another day of this." But in looking back now, it was all worth it.

When the tour was over, I had mixed emotions. I had been ready to go home for a while, but deep inside I realized I had completed the adventure of a lifetime. While I was happy to return to a somewhat normal life, I also realized I was going to miss the excitement and pace I'd kept up over the last two years.

I went home to Ohio in May 1977 and returned to work on the N&W. There's that old saying, though, that "you can't go home again." Our eyes had been opened to what the real world looked like, so from the time we first returned home Laura and I started talking about leaving Ohio. In February 1978 I made some calls to people I knew on the railroads about jobs—at that time, all three big roads in Portland were hiring. I decided to hire on with the SP, and by July 1978 we had moved to Portland. I have been there, and with the 4449, ever since. ■

1980: Abandonments, mergers, deregulation

MIKE SCHAFER; J. DAVID INGLES COLLECTION

J. DAVID INGLES

MERGING JUST IN TIME: Orange Detroit, Toledo & Ironton GP40's, their 6400-series road numbers reflecting their new ownership, sail over a Norfolk & Western line at Delta, Ohio, four years after DT&I's acquisition by Grand Trunk Western on June 24. It's just as well. DT&I, put together by automaker Henry Ford, lived by its latter-day slogan, "We Have the Connections," taking freight to and from Ford's Detroit-area facilities and interchanging with all the major east-west trunk lines through Ohio. After President Jimmy Carter signs the landmark Staggers Rail Act on October 14, roads such as DT&I will lose must of their *raison d'être*. The Staggers Act partially deregulates railroads for the first time in about a century, freeing them to more easily change rates and make contracts with shippers. Gradually the number of interchange points will be reduced, and mergers will increase, eventually creating today's giant systems.

PRESAGING THE NEXT ROUND: The merger movement gains momentum on November 21 as 10-year-old Burlington Northern absorbs a key connection, 4650-mile St. Louis-San Francisco, "the Frisco." To the east, CSX Corp. is created as a holding company for Chessie System in the Northeast and Family Lines in the Southeast. Within a few years, CSX will formally become one system, and BN's big western neighbor Union Pacific will double its size by absorbing Missouri Pacific and Western Pacific, then the Katy, all setting the stage for the mid-1990's round of mega-mergers.

NEW POWER UNDER THE WIRES: "Toasters" or "Meatballs," many will come to call them, Amtrak's compact Swedish-design 7000 h.p. AEM7 electric locomotives constructed by an EMD-ASEA consortium. The first one, No. 900, makes its trial run out of Wilmington, Del., on January 23. Amtrak eventually will own 54 of the little speedsters, relegating the legendary 1930's GG1 motors to history and, later, their 1970's E60CP successors as well.

PAUL D. SCHNEIDER

THE LONGEST NIGHT: GP38-2 4342, at Albert Lea, Minn., in February, faces only a few weeks more of service before the largest railroad shutdown in U.S. history occurs March 31, when the 7500-mile Chicago, Rock Island & Pacific ceases operation. Eventually, about three-quarters of "the Rock" will be picked up by existing and new roads. First big example: On October 20, RI's 965-mile Kansas City-Tucumcari (N.Mex.) Golden State Route is sold to SP's Cotton Belt, and RI's 645-mile Herington, Kans.-Dallas line is sold to Katy's new Oklahoma, Kansas & Texas. [Read more about the Rock's final weeks in March 2005 TRAINS, a special issue devoted to the 1970's.] . . . On February 29, the Milwaukee Road ends all service west of Miles City, Mont., retrenching to a 4900-mile system.

ASLEEP FOREVER: On December 2, Illinois' Secretary of State issues a Certificate of Dissolution for The Pullman Company, chartered in 1867 as Pullman's Palace Car Company.

MIKE SCHAFER

DAILY STEAM ENDS: Northwestern Steel & Wire on December 3 drops the fires on the ex-Grand Trunk Western 0-8-0's at its mill in Sterling, Ill., last continuous daily non-fireless steam operation in the U.S.

OTHER STEAM CURIOSITIES: In May, railroaders on the 320-mile Toledo, Peoria & Western get to play with a full-size steam locomotive as newly restored Nickel Plate 2-8-4 765 visits. The Berkshire hauls freights, switches the yard, and pulls excursions. (Under repair recently, 765 looks set to steam again in 2005.) . . . On October 4, steam comes and goes as the Smithsonian Institution reactivates its 1831 *John Bull* in Washington D.C., while Chessie System's 1953 Lake Michigan carferry *Badger* sails home to Ludington, Mich., from Milwaukee for the last time. The coal-fired *Badger* [pages 90-98, STEAM GLORY 2004] will return under private operation but will not carry freight cars.

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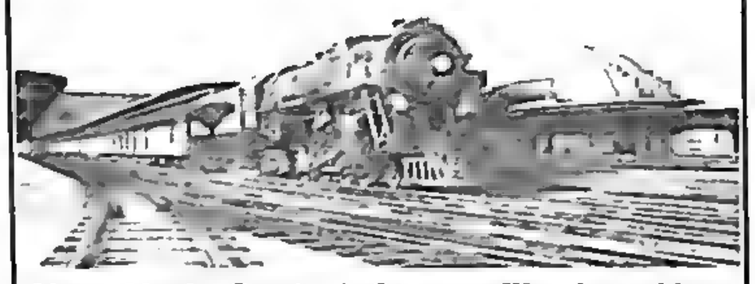
VINTAGE VIDEOS



New York Central Steam Finale: New program with mid-1950's steam in Ohio and Indiana. See shots north of Cincinnati around Sharonville, west of Cincinnati with doubleheaders from Riverside, and riding the passenger trains with Hudsons to Chicago from Cincinnati. 8mm films from Warren Scholl M&N, D/VHS 60 Min $29.95

Norfolk & Western Steam Freights: 8mm movies from Warren Scholl of 1950's action from Cincinnati to Portsmouth plus other areas like Williamson and Leager near the end of steam. Articulateds and other freight power. M&N, D/VHS Appr. 60 Min. $29.95

Riding the Narrow Gauge in the 1950's: 8mm films by Warren Scholl showing a 1954 trip from Alamosa-Chama-Silverton, plus 1956 trip to same area. Mostly onboard shots from caboose behind engines, plus some trackside and pacing. M&N, D/VHS Approx 60 Min. $29.95

DM&IR Yellowstones-Giants of Steam: 16mm footage from Maynard Laing, 1958-59, Pacing of the 2-8-8-4's, big ore trains, etc. LT, D/VHS 30 Minutes $19.95

Northern Pacific Farewell to Steam: 16mm from Laing, 4-6-0 1372 stars on several trips, plus other NP steamers around Seattle. LT, D/VHS 30 Min. $19.95

Rayonier-The Last Steam Logger: 16mm Laing footage, 2-6-6-2's #14,and #38, plus #90 on log trains in Washington in the early 1960's. LT D/VHS 30 Min. $19.95

Canadian Steam 1957: 16mm Laing footage, Vancouver area, Kamloops, plus prairies. Engine servicing areas too with CN and CPR LT, VHS 45 Min. $24.95

Canadian Steam 1958 16mm Laing footage, Prairies with last run of Virden CN train, Winnipeg, vintage shots of CPR 2860, and CN 6060 LT,VHS 45Min. $24.95

Canadian Steam 1959 16mm Laing footage, Prairies, Portage La Prairie, with CNR, and CPR in the last year of steam in the area. LT, VHS 50 Min. $24.95

New Haven Railroad in the 1950's: 16mm Cochrane Footage, last steamer 3016, Maybrook,Highland line, Electrics, etc. M&N VHS 60 Min. $39.95

New Haven Mainlines: Mostly electrics in the 1950's.8mm M&N, VHS 65 Min. $39.95

Abbreviations M&N = Music and Narration only (no train sounds). LT=Live train sounds and narration. D/VHS= Available in DVD or VHS. VHS=Available in VHS only
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How I became 'Old Smoky'

A onetime Union Pacific fireman recalls two incidents that earned him his sooty nickname

OCTOBER WAS a favorite month for me in southern Idaho. Though there was a chill in the air, most of the days were sunny and, most important of all, hunting season was in full swing in that hunter's paradise. My hometown of Glenns Ferry was a busy crew change point on Union Pacific's main line to the Pacific Northwest. The town is along the Snake River, which the railroad follows for about 10 miles in each direction before beginning a stiff 1.8 percent grade to the top of the bluffs that make up the geography of this area.

In the early 1950's, I was working the extra board as a fireman. One of my neighbors, Ace Mierhoff, had hired out as a brakeman about the same time I did. Both of us had worked just long enough to be real hot shots in our own eyes, and we were very competitive with each other. Further, we certainly were not beyond belittling each other for perceived mistakes.

All day one October 4th, Ace and I had wanted to go pheasant hunting, but neither of us dared to leave the telephone for fear of missing a call to work. It was good we stayed home, as about 4 o'clock the phone did ring, calling me for a west hill helper job with engine 3807 and engineer Wilson Steen. Little did I know that Ace had been called as a rear brakeman on the same train.

Wilson was a swell guy working from the engineers' extra board and had recently become a representative in the Idaho state legislature. He was the kind of engineer after whom I hoped to pattern myself. This required developing a sense of pride in doing the job right, as well as learning the required skills. From a fireman's standpoint, doing the job right meant firing an engine to achieve a maximum steam pressure with a minimum of smoke.

Built in 1936, our engine was from UP's first batch of 4-6-6-4 Challenger articulated locomotives. They had 69-inch drivers and carried 255 pounds boiler pressure. Most were built as coal burners, but by the 1950's they had all been converted to burn oil.

The fireman on an oil-burner has considerably more immediate control

On October 17, 1953, around the time author Les Clark was an extra-board fireman here, a westbound Union Pacific freight is east of Reverse, Idaho, climbing the grade out of the Snake River valley. Challenger 3838 is on the point; 2-8-8-0 pusher 3528 was added at Glenns Ferry.

DAVID W. SALTER

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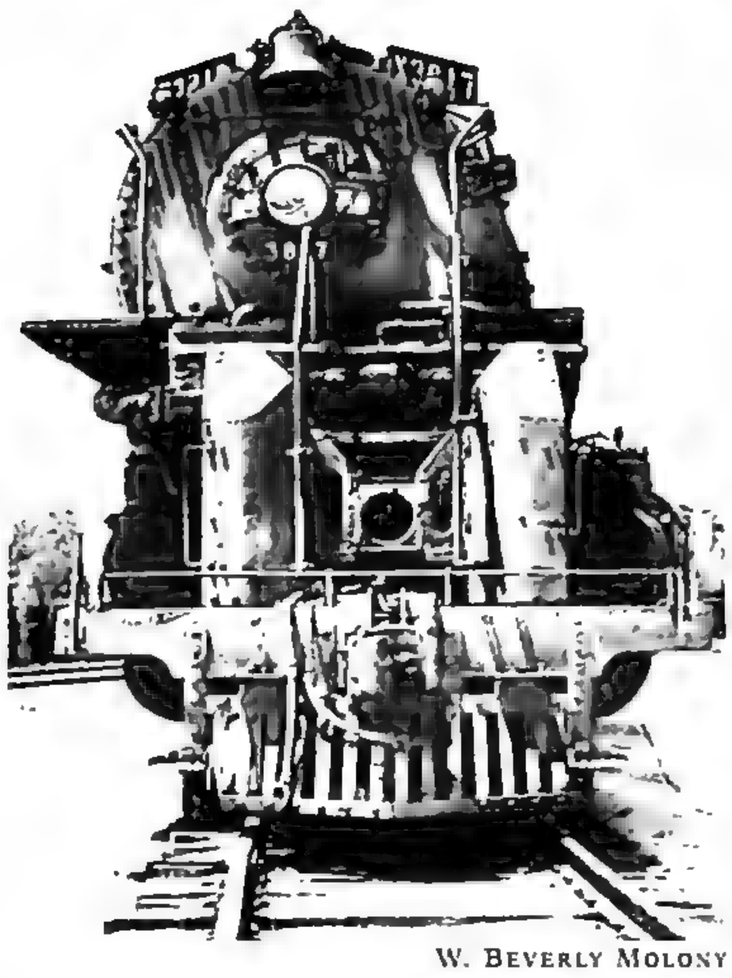
of the fire than he does on a coal-burner. The oil firing valve has direct control over the amount of oil being consumed, as indicated by the color of smoke at the stack. This in turn depends on how hard the locomotive is being worked. By watching the stack with one eye and the engineer with the other, a balance can be met that requires no more than a light haze at the stack even when under full throttle. Of course, operation of the atomizer, draft door, and oil temperature control also entered the equation. All this is true with a properly steaming locomotive in a perfect world.

In the *real* world, all sorts of obstacles can and do come up. Things such as the condition and temperature of the oil, the basic condition of the locomotive, and the operating methods of the engineer all came into play. The results in these cases were sometimes not exactly favorable to an environmentalist, or anyone else.

The westbound train that we were to help had arrived. It had three EMD F units on the point. Wilson and I, with the 3807, were attached to the rear of the steel caboose. Soon the air test was completed and we began to move.

Since the line is nearly flat for the first 10 miles, we just loafed along with the 3807. But when the train hit the grade, we really began to work. The engine was steaming well, with Wilson giving the train a hefty shove with about 15 pounds showing on the back-pressure gauge. I had a nearly clear stack and plenty of water in the boiler. All was well with the world!

About 5 miles up the hill, the track curves through a chalk cut. Just as we entered this cut, the head end, for some unknown reason, set the air and we quickly came to a stop. This was before the days of radio communication. As the rules required, the rear brakeman, my buddy Ace Mierhoff, got off the caboose and started walking back to give flag protection to the rear of the train. The 3807 had been operating right against the 255 pounds of pressure. When the throttle was suddenly shut off, I knew it was but a matter of seconds before the safety valves popped. So I pulled a newly learned trick and completely shut off the oil.



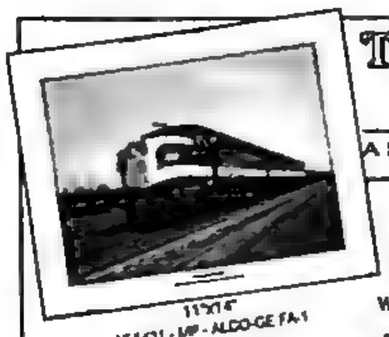
W. BEVERLY MOLONY

The poor steaming of UP Challenger 3817 (seen demonstrating its articulation on a curve) helped a young fireman make a name for himself.

This killed the fire, but I was not worried about getting it back because the almost incandescent brick lining in the firebox would easily ignite the oil when I reopened the firing valve. And, with the feedwater pump still operating, I was able to avoid the safety valves lifting. Boy was I smart!

Suddenly the slack ran out and we started moving. To avoid a break-in-two, Wilson immediately started working the engine. This allowed a mass of cool air to be drawn into the firebox, and I knew I had to get the fire relit immediately. I fed it a shot of oil but had no luck. I gave it another. Still no luck. At this point I was desperate and opened the oil valve considerably. It worked! With a minor explosion and accompanying clouds of acrid black smoke that filled the cab and engulfed the engine for a few moments, the fire was now burning bright.

The wind was such that neither Wilson nor I had heard the flagman being whistled in, but Ace had heard it. He made a dash for the caboose and was just beside the firebox on the engineer's side when my explosion occurred. Wilson said that when the smoke cleared, he could see Ace on the rear platform



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LEONARD MCLEAN

Could Amtrak recover this fast?

SEABOARD AIR LINE 0-6-0 1132 gently noses the *Silver Comet*–fully loaded with passengers–into a track at the road's Howell Yard in Atlanta sometime in the late 1940's or early '50's. It seems the *Comet*'s two E units started too fast and broke the drawbar of the first car. Rather than annul the train or switch out the damaged car, Seaboard simply pushed the train closer to repair facilities, changed out the drawbar, and sent the train on its way to Birmingham. Total delay: 1 hour!

of the caboose with a thoroughly blackened face, shaking his fist at us. The curvature of the track kept him out of my view, but I knew the fist was for me.

I was able to avoid Ace for the next few days. In fact, the next time I saw him, he was standing at the west switch of Kuna siding. He was working as head brakeman on a train that was in the passing track for a meet with us. This had been one of those trips when all was not right with the world. I was on an eastbound drag pulled by the 3817, a notoriously poor steamer. Also, the engineer was a real jerk. I had struggled with 3817 all night long after boarding it in Huntington, Ore., the end of our subdivision. And we were only halfway home! After leaving our midpoint at Nampa, the line climbs on about a 1 percent grade through Kuna to Orchard.

The engine was working hard on this grade and I was fighting for steam. As a last resort, I thought I would try feeding more sand through the flues, though I had periodically done this during the trip. This time, though, I was desperate enough to try almost anything. Rather than three of four scoops, I just kept feeding the sand and, to my surprise, the steam pressure started rising. The object of sanding the flues is to remove the accumulation of soot which builds up and acts as an insulator to inhibit good heat transfer. And, of course, all that soot is ejected in voluminous clouds of black out the stack.

I was still busy sanding flues when we met Ace's train, with him standing beside the track. He later claimed that it literally rained wet soot on him. And as we passed, he forcefully looked up at the cab to see who was making this mess. Guess who he saw? At that moment, I acquired the handle of "Old Smoky." No explanation of circumstances could rid me of this wound to my pride.

So, painful as it was, I lived with the moniker for a year or so until I transferred to Salt Lake City and lost contact with Ace and the nickname.

—Les Clark

Dad, trains, and me

A son remembers a special encounter with a Grand Trunk 4-8-4, and all that it stood for

THERE I AM, 11 years old, dwarfed by the Grand Trunk Western 4-8-4 on the next track during its stop at Pontiac, Mich., on March 24, 1960. This picture [following page] represents several things to me: Gratitude for my father's appreciation of my love for trains, one of the final glimpses of U.S. Class 1 steam railroading, and one of the last things my dad gave me before he died.

Often I'm impressed by how contributors to TRAINS and CLASSIC TRAINS refer to their fathers. For some, their fathers were railfans who took their sons on rail outings, thus passing on an interest in the hobby. Others were professional railroaders, and visits to Dad's place of work and a resulting cab ride or some other "inside view" fostered a lifelong love of the industry. In my case, the love of trains began elsewhere, but my dad went out of his way to support it. That's the story behind the picture.

On this unseasonably cold spring day ("Michigan: Where March comes in like a lion and stays that way"), Dad and I had just completed a 26-mile ride in the cab of 4-8-4 6327 from Detroit's Brush Street station to Pontiac. At my request, he had secured liability releases from the railroad, taken time off work so we could catch a mid-afternoon bus from Pontiac to Brush Street, and then rode with me on the head end of GTW's Detroit-Durand train 19. Dad was not a railfan, although as an antique collector he appreciated steam engines and history.

It was not from him that I came to love railroading; rather, like many boys in that era, Lionel was my gateway to the world of trains. And my father was great about encouraging that. He would drive me to trackside when I asked, or take a detour on a family vacation so I could see an obscure short line or other rail attraction, or stop the car or circle his private plane so we could get pictures of rusting steam hulks in a scrap line or some such thing. As I said, he appreciated the history, but, unlike me, was not an enthusiast. In fact, I can still recall him wondering at my junior high school knowledge of locomotive numbers, specifications, and rail trivia and saying: "Why can't you do that well on your schoolwork?" (Actually, it worked out OK, since in my career as a university business professor I sometimes teach a course in logistics in which I can draw from my rail knowledge.)

Back to the picture. Our cab ride that blustery Michigan afternoon was

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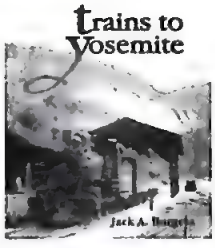

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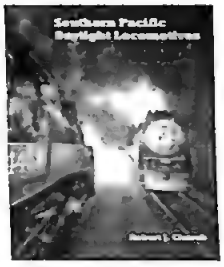

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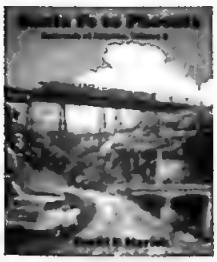

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HANK LANDRY PHOTO; COLLECTION OF MICHAEL LANDRY

In a photo by his dad, 11-year-old Michael Landry stands at Pontiac with the Grand Trunk Western 4-8-4 they rode from Detroit on March 24, 1960.

an event that could not be repeated. Within days, GTW's order of new EMD switchers and Geeps would essentially banish steam from regular service on U.S. Class 1 rails. Only a few steamers would remain active on the Norfolk & Western during that spring of 1960, and a lone 2-8-0 would work on a Colorado & Southern branch until 1962. Otherwise, except for the occasional fan trip and the later tourist-train renaissance, American steam faced a slow death for another decade or so in shortline and industrial service. As a result, Dad and I were among the last witnesses to the Big Show.

Time passed. Like many others, I made my peace with diesels, and, as I grew up, faced a life more complicated than questions of what engines would be on 428 tonight, or what would happen when the next train-off petition was granted. There were issues of education, careers, marriage, family, and more.

But I continued to chase trains every now and then. In fact, I still do. And my dad came along on occasion. I have great memories of him in the late 1980's accompanying my two sons and me to watch Union Pacific Challenger 3985 storm through Harmon, Wyo. And for my 40th birthday in 1988 he joined my mother in luring me from my home in Colorado to Indianapolis for a surprise trip behind then-recently restored Nickel Plate 2-8-2 587.

But a severe heart attack in 1984 somewhat limited Dad. Toward the end of 1992, his health was failing and we knew he had little time. I visited him that fall for what I knew would probably be the last time. Weak and wasted on a hospital bed in Ann Arbor, Mich., he told me to check with my sister-in-law about something he had given to her for me. I did, and she handed me this picture. It was something I had forgotten about for a long time. Previously I had only seen it as a slide, but Dad had gotten my sister-in-law to have it made into a framed print for me. Six weeks or so before his death, Dad thought of my love for trains and gave me a remembrance of that cab ride we took more than 30 years before.

I've got a lot of train pictures, some of them with better action, better composition, better lighting, and certainly with better interest than an 11-year-old boy taking up space. But this one is special. I tend to spend a lot of time gazing at it. In it, I recall the final days of Grand Trunk steam, those great old heavyweight coaches, semaphore signals silhouetted against a fading sky, later winter trips home from college to this same Pontiac station, and the cold, cold air of that brisk Michigan winter-trying-to-turn-into-spring. And I remember how my father went out of his way to accommodate my oddball interest in railroading.

To me, it's a great picture.

Thanks, Dad.—*Michael Landry*

A new way to unload sand

What happened when two boys matched wits with a hopper car of frozen sand

THIS STORY was related to me by those personally involved in a new but somewhat less-than-satisfactory method of unloading sand. The time was in the middle of the Great Depression. The locale was the Upper Peninsula of Michigan, the "U.P." The two unloaders were the sons of a local Methodist preacher, long in spirit and integrity but short in the cash necessary to feed and clothe his family. The two brothers, Harry and Pierce, went forth one blustery winter morning with the greatest intentions of returning home with the financial ability to take care of the evening's meal. This they did—but in a way somewhat different than initially anticipated!

To understand the task they faced, one should have a basic knowledge of the foundry industry as it existed in that time and economic strata. The principal raw materials of a typical iron- and steel-casting foundry were iron ore and scrap steel, plus lime . . . and sand. Foundry sand is different from basic construction, or play, sand, which is dredged from creekbeds and too coarse and dirty for foundry use. Foundry-grade sand is a finer and much purer mineral product, screened and cleaned of trash. It was used in forms and molds which were filled with white-hot molten iron. Foundry managers were quite finicky when ordering this sand. Often the desired grade would come from hundreds of miles distant and was normally shipped in 35-foot hopper cars.

At the foundry, these loaded hoppers would be spotted by the local railroad, and the doors would be opened when the car was over the grates leading to the material storage areas. Gravity took care of the unloading. Even such a basic cost as car demurrage was carefully considered: Depending upon the foundry's credit and billing with the local railroad, it could usually "hold" the car two or three days without these charges being applied.

The brothers either knew, or knew of, most of the businessmen in the area, and they were not at all shy in approaching them in their search for work. More than a few of these referred them to the local foundry, knowing that this business required casual labor.

Winter in the U.P. is generally a combination of bitter cold and extreme cold. Thus the sand, when it finally arrived, could be either frozen or frozen

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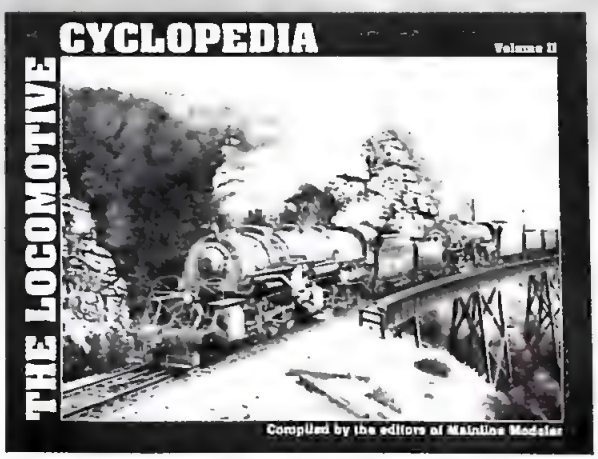

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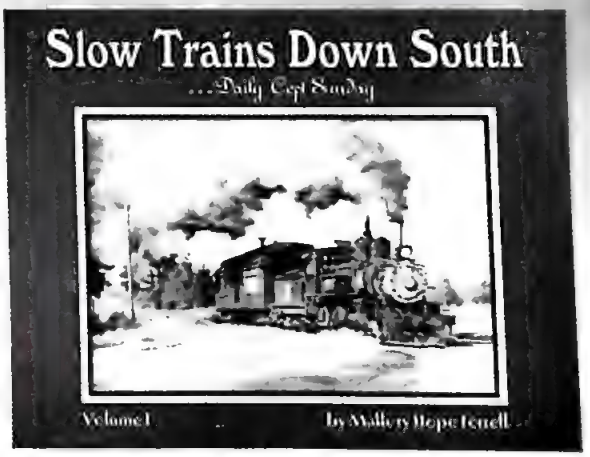

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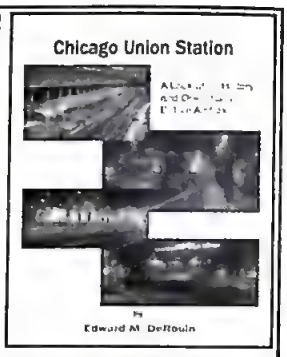

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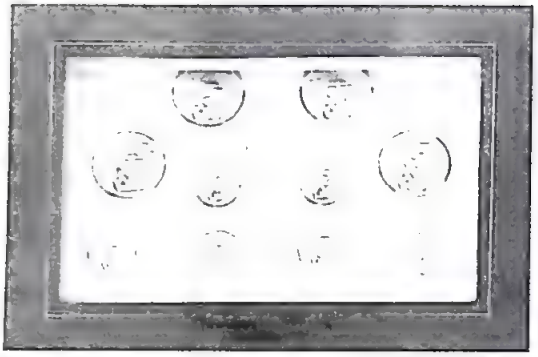

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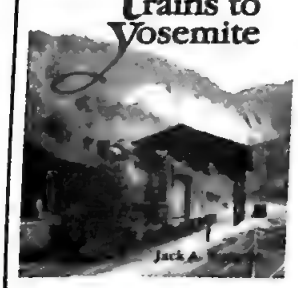

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solid. During this particular week, the U.P. had been almost shut down for several days as the result of a bitter storm coming straight off Lake Superior. Little was moving—especially the sand within the wooden sides of the hopper spotted the previous morning on the foundry lead. So when relief arrived in the form of Pierce and Harry, the foundry manager offered them the mighty sum of $1 each to unload the car—the foundry would even supply the shovels, pick axes, and hot coffee.

By noon, the brothers noticed that an hour's work had cleared only one shovelful of sand, and at that rate it would be a week into the next month before they would have that car unloaded. But Pierce, being the older and wiser of the two, also knew that a cousin employed in the quarry across town likely had immediate access to something that might be of great help to them—sticks of dynamite.

Their plan was to get several sticks, knock holes in the sand at the bottom of the hopper doors, and then shatter the sand with a well-placed charge. Off they rode, on their salvaged bicycles, to their cousin's quarry. Knowing they would be queried as to the dynamite's planned use, they concocted a story of needing to break up a frozen pile of dirt and sand, but omitting the exact location of this material.

The cousin provided them with some dynamite and primer cord, cautioning them that an amount of dynamite called an "egg" would be more than enough to rupture frozen piles of dirt. He also warned them to be far, far away and behind something solid when they touched off the primer cord.

Quickly the brothers discovered that the sand at the hopper doors was as frozen as that at the top. Drastic measures were called for! They knew their father had some tools at home—and off they rode to secure a hand-cranked brace and bit. Luck often follows ingenuity, and they quickly spirited this tool out of the shed and back to the foundry. There they took turns lying on their backs at the mouth of the hopper doors, one holding the brace at the face of the sand and the other kneeling down and turning the hand crank.

Next came a discussion as to exactly how much dynamite was needed; they knew how much an egg of dynamite was, but they lacked the experience required to compute the proper charge. That was quickly solved, however, by the weather and the mutual thought that if one or two eggs was good, several were better, and even more would be best. It wasn't long, then, before each door opening was prepared and they were able to retreat behind a corner of a building, trailing the fuse cord.

After the passage of many, many years, the brothers were still exceedingly vague as to just how many eggs were placed in the frozen sand—only that they must have used enough to complete the unloading chore.

Matches were applied to the cord, and the brothers covered their ears in anticipation. When the explosion occurred, much of the force went through the frozen body of sand and to the sides, ends, and truck bolster supports. As Pierce later explained to the railroad police, there was sand all over the place along with hopper-car parts. The trucks and couplers were relatively undamaged; all else was beyond consideration for repair, according to the local freight agent. The suddenly loosened sand now was a burial chamber for their father's brace and bit, which were not recovered for some days. The railroad agent correctly surmised that someone had to have assisted the boys in securing dynamite. When asked, they readily ''fessed up as to how they had gotten it.

Between short bursts of coughing, tthe foundry manager pulled the agent aside and in whispered conversation explained how the actual damage was re-ordained. And he reminded him that the foundry had been, and still was, a steady and well-paying customer ff the railroad.

The agent shortly thereafter wrote ff the car as irreparably road-damaged. hile the brothers were subject to sevl lectures from both the plant manr and their father, they survived. leed, both men secretly admired the enuity the boys showed in handling ugh job, enough admiration to pret charges being placed against the thers.—*Steward A. Sparks* ■

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Curved-sides to Stone Mountain

The two freshly outshopped cars seen here are members of the famous family of "Cincinnati curved-sides." The Cincinnati Car Co. began as the shops of the Cincinnati Street Railway. The shops also accepted work from other railways, prompting the operation to formally enter the commercial carbuilding business in 1902. Cincinnati Car's best-known product began with a request from the Kentucky Traction & Terminal to produce a lightweight interurban. The result was a low-profile car that weighed about one-third as much as a standard car. Key to the weight reduction—and the car's most distinguishing feature—was a patented side-wall design that included a reverse curve to achieve greater strength with less material. During 1922-29, Cincinnati built an even 400 curved-sides, from 26-foot, four-wheel city cars to 47-foot, high-speed interurbans. Georgia Power, which operated lines from Atlanta to Marietta and Stone Mountain, received 10 new curved-sides in 1926; numbered 480-489, they were the only curved-sides built with end doors to permit passage between cars. Nine secondhanders arrived in 1941-42: six from Toledo & Indiana became Georgia Power 474-479, and three from Nashville Interurban became 494-496. (Nos. 490-493 were non-curved-sides.) Shortly after their arrival in Georgia, cars 474 and 496 are seen on Stone Mountain runs; 496 (below) is eastbound on Atlanta's Alabama Street on November 18, 1942. Marietta service ended in January 1947; the Stone Mountain line quit 14 months later; and the last Atlanta streetcar ran in April '49.

Two photos: W. C. Janssen, Krambles-Peterson Archive collection

Harwood honored for Van Sweringen book

Cleveland Union Terminal was just the tip of the brothers' empire

THE Railway & Locomotive Historical Society in October announced the winners of its annual Railroad History Awards, and Herb Harwood, author of our story on Cleveland Union Terminal [pages 20-31], was among them. Harwood received the George W. and Constance M. Hilton Award for his book *Invisible Giants: The Empires of Cleveland's Van Sweringen Brothers* (Indiana University Press, 2003). It's a fascinating story of the rise and fall of two very unlikely empire-builders.

Although CUT (or at least the building complex above it) was the brothers' most visible and lasting monument, they were major players in the national railroad scene of the 1920's. The Vans' influence is all the more remarkable because they didn't set out to become rail barons. I read this book while working on Herb's CUT article, and I highly recommend it.

The Gerald M. Best Senior Achievement Award went to Arthur D. Dubin, author of the books *Some Classic Trains* and *More Classic Trains* (Kalmbach 1964 and 1974, respectively). Art has had many articles in TRAINS, and two in CLASSIC TRAINS: "The Flower of Travel Comfort" on UP's *Columbine* [Winter 2000] and "Coast to Coast by Rail and Air" [Winter 2003]. In addition, Art has generously shared with other authors his extensive collection of railroad material, much of which is now in the R. R. Donnelly Library at Lake Forest College, north of his native Chicago.

Jim Boyd, editor emeritus of *Railfan & Railroad* magazine, received the Fred A. and Jane R. Stindt Photography Award. A prolific, extensively published lensman, Jim has helped teach many the basics with his "Camera Bag" column in *R&R*.

The David P. Morgan Article Award went to Scott R. Fletcher for "Public Dreams, Private Means: Cincinnati and Its Southern Railway, 1869-1901," published in the March '03 issue of *Journal of Transport History*.—*Rob McGonigal*

PCC paradise by the Bay

Although the revolutionary trolleys Mac Sebree writes about in this issue [pages 32-35] have largely been sent to museums or scrapped, they're still providing transportation in a handful of places, including Boston; Kenosha, Wis.; and soon (pending the resolution of a routing dispute) Philadelphia. But, as Mac says, the last big PCC show is in California's city by the Bay:

"San Francisco is where you go today if you want to see PCC cars in action. In addition to a few leftovers from the original Municipal Railway fleet, the city, working with the Market Street Railway (a private heritage group), purchased most of the surviving fleet of New Jersey's "Newark Subway," replaced with modern light-rail vehicles only three years ago. San Francisco hit on the marvelous idea of painting the cars in the liveries of many of the cities that operated PCC cars. They run every day on the F-Market & Wharves line, interspersed with rolling pre-PCC gems from Milan, Italy; Blackpool, England; and San Francisco itself."

Surviving superstars of steam

The five locomotive designs featured in our photo survey of steam orders of 1940 [pages 36-44] have fared well in preservation—with one exception. Out in front both in terms of actual number of preserved engines and percentage of the total fleet is UP's Big Boy. Of the 25 built, 8 survive in museums from Pennsylvania to California, Wisconsin to Texas. None has operated since the end of steam, however.

Three of the Missabe Road's 18 M-3 and M-4 2-8-8-4's are still with us, all in Minnesota. Proctor and Two Harbors have Yellowstones displayed in parks, while No. 227—the engine pictured on pages 36-37—is a major exhibit at the Lake Superior Railroad Museum.

Chesapeake & Ohio Alleghenys may be found at the Henry Ford Museum at Greenfield Village near Detroit (No. 1601) and at the recently reopened Baltimore & Ohio Railroad Museum in Baltimore (1604). The other 58 C&O 2-6-6-6's, and all 8 of the Virginian's, were cut up.

Only one of Norfolk & Western's 14 class J 4-8-4's remains, but she's the only one of our "Big Five" to operate in post-steam-era excursion service. From 1982 to 1994, N&W 611 was the star of the Norfolk Southern steam program. Today she's at the Virginia Transportation Museum in Roanoke, under cover beside the NS program's other big engine, N&W 2-6-6-4 1218.

Which leaves the Pennsylvania Railroad T1—the most numerous of all streamlined steam classes—gone without a trace but for photographs and a few number and builder's plates. Although PRR more-or-less systematically saved one of each of its most common steam classes, it ignored the 52 4-4-4-4's and the 26 freight duplexes (as well as the 125 C&O-design 2-10-4's of World War II).

J. J. Young Jr.

Photographer John Joseph "J. J." Young Jr., 75, died November 27, 2004, in Charleston, W.Va. A native of Wheeling, W.Va., Young photographed thousands of trains on the B&O, C&O, W&LE, PRR, EL, LV, D&H, and other roads from the 1930's on. His work has been featured in many books and magazines, including CLASSIC TRAINS ["When the B&O Ruled Wheeling," Fall 2001]. Young worked as a telegraph operator on the W&LE for two years just out of high school. In 1959, he moved to Binghamton, N.Y., and became a photography technician and teacher at Broome Technical College. He retired to Charleston in 1995. In 1985, Young donated 194 prints to West Virginia Northern Community College, which is housed in B&O's old Wheeling passenger station. His West Virginia negatives will go to the state's Division of Culture & History.

True, on a road where classes routinely counted hundreds of engines, the 78 duplexes were almost a footnote. More important, perhaps, is that the T1's and Q's were "damaged goods," expensive, if brave, stands against the diesel that were quickly overrun. In the 1950's, when the what-to-save decisions were made, Pennsy would surely have seen the T1 as a monument to failure. But what a marvelous piece of the historical record one would be today!—*R.S.M.*

Those elusive C-Liners

The photo by Mike Schafer on page 57, of Canadian Pacific C-Liner 4105 in the Rocky Mountains, although it has been published elsewhere, was not one of the seven used to illustrate his splendid article entitled "The Case of the Elusive C-Liners" that appeared in July 1972 TRAINS [pages 40-47]. The TRAINS article is a fascinating read today in the Internet age, being the day-by-tale of three U.S. railfans on a September 1971 trip trying to track down rare Fairbanks-Morse locomotives they weren't even sure still existed when they called at the CPR shop in Calgary, Alberta.

In that era, railfans had to depend almost entirely on what railroaders told them when they inquired at yards and shops, seeking permission to take photos as well as any further information on the diesels. One by one, a few of the last active C-Liners on the continent (two of which were saved) led the three travelers to the final chase, represented by Mike's photo in this issue.

If you want to tag along on that whirlwind trip of 34 years ago, you can view pages from the article at our website, www.classictrainsmag.com. ■

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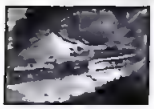

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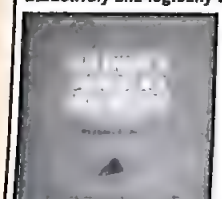

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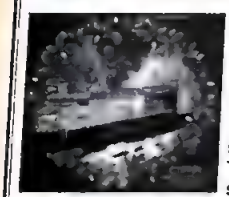

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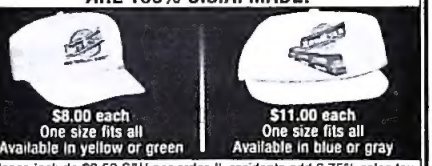

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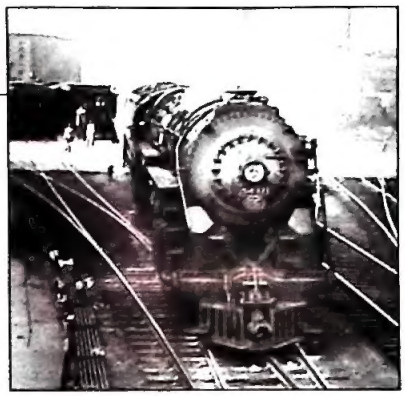

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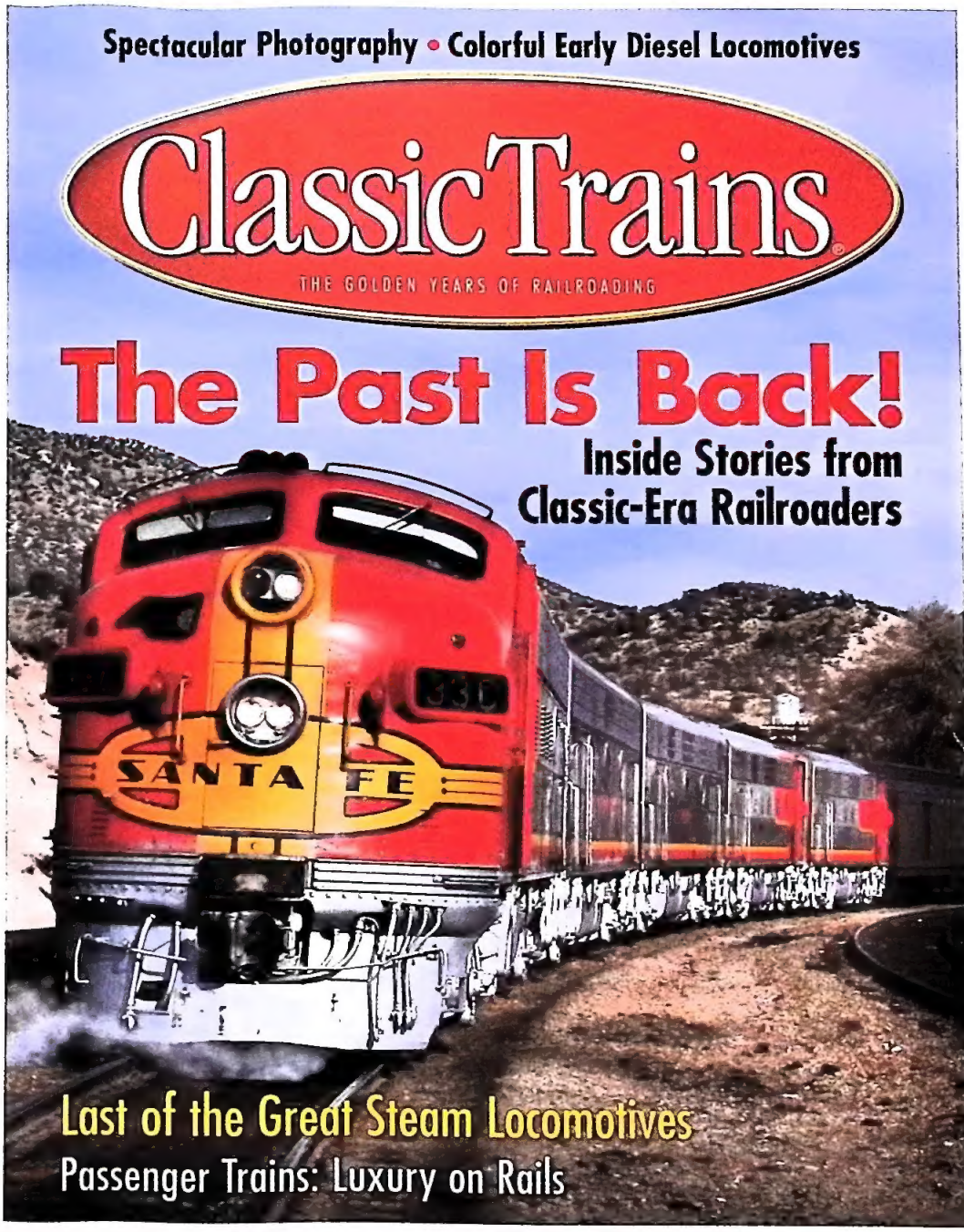
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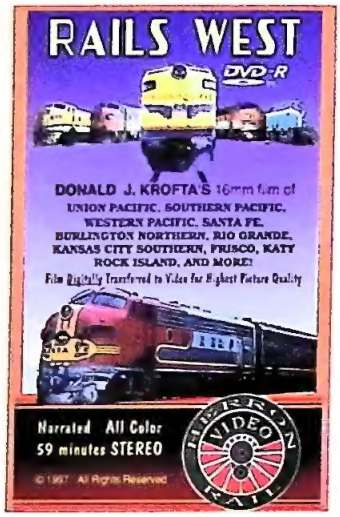
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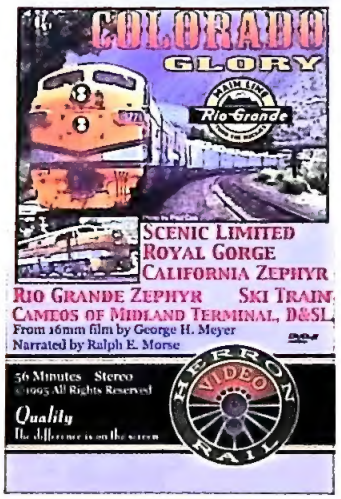

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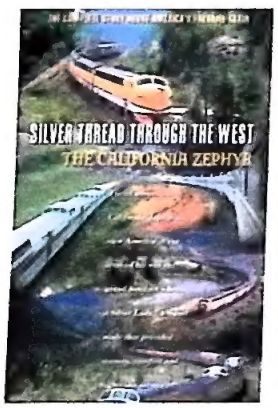

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